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ABSTRACT

In an effort to identify effective transfer practices appropriate to different community college circumstances, and to establish a quantitative database that would enable valid comparisons of transfer between their 28 member institutions, the National Effective Transfer Consortium (NETC) sponsored a survey of more than 30,000 students attending NETC colleges. A database was created containing responses from 14,000 students, representing a 44% response rate. Additional data were added on ethnicity, gender, age, and enrollment status on all credit enrollees from each member college for spring and fall 1988, amounting to information on almost 300,000 students in 13 states. This report presents the results of the first year's research efforts of the NETC. Chapter 1 reviews the inadequacies of the most common current approach to measuring transfer rates, proposes a new definition of transfer rate, and presents findings from the study in support of the new measurement. Chapter 2 uses data obtained from the NETC colleges to illustrate the possibility of calculating an expected transfer rate range for any college or group of colleges. Chapter 3 considers the different propensities to transfer of different types of students, and discusses a new way to measure transfer effectiveness based on this insight. Chapters 4 and 5 review organizational issues and transfer practices and strategies that colleges must consider in order to achieve high transfer effectiveness. Chapter 6 sketches a specific approach colleges can use to enhance their transfer function. Appendixes contain an overview of the study methods, the questionnaire, and a brief portrait of each of the member colleges of NETC. (GFW)

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ENHANCING TRANSFER EFFECTIVENESS

A MODEL FOR THE 1990S

A Study for The National Effective Transfer Consortium

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JC900493

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"There will be many more opportunities than restraints for colleges and universities in the years ahead, if the leaders see and act upon the manifold possibilities."

– Dale Parnell,
Dateline 2000: The New Higher Education Agenda

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Preface

The National Effective Transfer Consortium (NETC) was founded in the belief that research could help community colleges improve their capability to transfer students to four-year colleges and universities. The 28 community colleges that formed NETC funded BW Associates, an independent education policy research firm, to conduct research focused on transfer practices at their colleges as a means to:

- bring clarity to the transfer issue;
- identify effective practices appropriate to the different circumstances faced by community colleges;
- establish a database that would enable valid comparisons to be made among NETC colleges.

This study presents the results of the first year's research efforts. During this initial phase, BW conducted fieldwork at all NETC colleges and mailed a questionnaire to more than 30,000 students. With an average response rate of forty-four percent, a database has been created containing survey responses from about 14,000 students at the 28 colleges. To this information, we have added data — ethnicity, age, gender, enrollment status, etc. — on all credit enrollees from each college for Spring and Fall 1988, amounting to information on almost 300,000 students in 13 states. This massive database is unique. It will enable a wide range of transfer issues to be examined quantitatively and comparatively for the first time.

Every community college has a distinctive context, educational program, faculty and student body. The data for each NETC college have thus been analyzed individually in a report presented only to that college, under the general title, Measuring Transfer Performance. In addition to these individual college reports, this companion study provides conceptual underpinnings for the analysis. It redefines the measurement of transfer rate, introduces the concepts of expected transfer rate and transfer effectiveness, proposes a model of factors affecting transfer, identifies organizational practices of "effective transfer colleges", and describes specific strategies that may be effective in assisting different types of students to transfer.

As the initial phase in a multi-year research program, the study focused heavily on the development and testing of new measures that would enable community colleges to assess their transfer program strengths and weaknesses. Though the statistics presented here are reasonably accurate, more data must be collected to refine and validate the measurements. Therefore, the reader should be cautioned that the statistics presented in the study are estimates, not precise numbers of the type required for reporting to government agencies.

The founding members of the National Effective Transfer Consortium have assumed a leadership role in making this research possible. We believe the results of this study will have a profound effect on how the transfer function is perceived. Further, we hope that this volume, together with the specific reports to each college, will enable community colleges to identify priority areas for developing a repertoire of effective transfer practices that match their needs.

The first chapter of this study reviews the inadequacies of the most common current approach to measuring transfer rates, proposes a new transfer rate definition, and presents findings from the study in support of the new measurement. Chapter 2 uses data obtained from the NETC colleges to illustrate how it is possible to calculate an expected transfer rate range for any college or group of colleges. Chapter 3 shows how different types of students have different propensities to transfer, and discusses how a new way to measure transfer effectiveness can be based on this insight. Chapters 4 and 5 review organizational issues and transfer practices and strategies that colleges must attend to in order to achieve high transfer effectiveness. Chapter 6 sketches an approach colleges can use to enhance their transfer function.

Appendix A provides an overview of Year 1 study methods; Appendix B is the questionnaire that was used to gather data from a sample of students at each NETC college. Appendix C presents a brief portrait of each of the member colleges of NETC. The References and Bibliography section lists published materials on community college practices, students, and transfer issues that are cited in the study or have been consulted in developing the study's conceptual approach and data collection strategy.

Acknowledgements

The National Effective Transfer Consortium was organized by Dr. Thomas W. Fryer, Jr., Chancellor of the Foothill-De Anza Community College District in California. He has provided invaluable advice to the study and has been most generous in providing logistical support for study activities. Carol Clawson, liaison to the study for Dr. Fryer, and Carol Maga, who acted in this capacity during the first part of the study, were particularly helpful. We are also grateful for the assistance of other members of Dr. Fryer's staff, in particular Jon O'Bergh, Catherine Bauknight, and Catherin Ayers.

From the outset, the Presidents of the NETC member colleges made it clear that they wanted to know how well their colleges were doing in transfer education. They asked for "hard facts — whether the news is good or bad." They have provided essential support and encouragement, constructive feedback on interim study results, and advice on study emphases that their colleges would find most useful. In a very real sense, they have helped shape the study's goals and directions.

On each NETC college campus, most of the requests from the study team for information or assistance came to study liaisons appointed by each President. The assistance of the liaisons was — and remains — indispensable. In addition to directing the preparation of college data needed by the study, they were in charge of survey logistics on their campuses and were instrumental in making arrangements for study team fieldwork visits to their colleges.

The authors also wish to acknowledge the assistance rendered by NETC college research and data processing staff. They implemented the Year 1 survey sampling plan developed by the study team, prepared the data tapes needed for sampling and analysis, and responded quickly to requests for supplementary or revised data required by the study.

BW Associates staff who made important contributions to the study include Maureen McCorry, Glen Tepke, Hedy Chang, Ray Colmenar, and Greg Greenway. Dr. Joel Brodsky, of J. Brodsky and Associates, provided invaluable statistical advice on sampling strategy and statistical methods.

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1

Rethinking Transfer Rate

Community colleges have a rich history in American higher education, one that reflects the movement in American society toward greater equity, access, opportunity, and diversity. While community colleges have continually changed since the first one opened its doors almost one hundred years ago, the message has remained the same: Higher education is available, and it can be many things to many people.

Dramatic shifts have taken place in higher education in the last fifty years with regard to who attends college, what they choose to study, and what a college education represents. By building more campuses, removing barriers to entry, expanding course offerings, and providing comprehensive student support services, the two-year college has been exemplary in expanding opportunity for study beyond the high school (Parnell, 1985). Community colleges have thus played a critical role in expanding access and opportunity for students, providing a range of programs from vocational /technical training to liberal arts, general education, basic skills, and ESL.

Enrollment at community colleges increased from just over half a million in 1960 to more than two million in 1970, and to more than four million in 1980 (Cohen, 1982). The number of students attending institutions of higher education multiplied over this period largely because of the jump in the number of students attending community colleges — students who otherwise might not have participated in postsecondary education.[1] As the numbers and makeup of students

[1] The increase in community college enrollments may be attributed to several conditions: older students' participation; physical accessibility; financial aid; part-time attendance; the reclassification of institutions; the redefinition of students and courses; and high attendance by women students, minority students, and students underprepared for traditional four-year institutions (Cohen, 1982).

attending community colleges changed, so did the missions of the colleges[3]. The seventies saw a marked expansion of their services as many attempted to become "all things to all people."

Demographic shifts and increased enrollments in the eighties have brought a new clientele to the community colleges, particularly more employed adults and other part-time students. Community colleges serve over half of all freshmen entering higher education, half of all the women in postsecondary studies, and more minorities than all of the four-year colleges and universities combined (Castillo, 1984). Parnell (1990) has predicted that enrollments in colleges and universities will continue to grow at about the same pace as the overall population growth, but economic pressures will dictate that the largest growth will occur in the lower-cost institutions.

Though community colleges' missions have changed over the years, one thing has remained constant: Their collegiate function strongly supports transfer to four-year colleges and universities. Transfer has increased in importance for many students as we enter the nineties, and pressure has grown for community colleges to prepare more students to complete their baccalaureate degrees. Increased emphasis on transfer has been stimulated in part by the need to become more competitive in a global economy. Training more workers with higher technical skills and the ability to continue to learn has become essential for both individual and national well-being.

The quality of the transfer function at community colleges has become a source of concern for several reasons. First, since the mid- to late seventies there has been a decline in the percentage of students transferring relative to total community college enrollments. This has raised questions about the effectiveness of transfer education at many community colleges[4]. The literature also has debated whether vocational/technical training has been overemphasized at the expense of transfer (Baron, 1982).

A second concern with the quality of the transfer function focuses on who the community college serves. Astin (1982) and others discuss the implications of the fact that Black, Hispanic, and Native American students are underrepresented at four-year colleges and universities and that higher percentages of these students begin their postsecondary

[3] The shift in the primary missions of the community college has been widely discussed in the literature (Cohen, 1979; Baron, 1982; Friedlander, 1980; Breneman and Nelson, 1981; Knoell, 1982).

[4] Lombardi, 1979; Baron, 1982; BW Associates, 1985.

educations at community colleges.[4] White student enrollment at community colleges is only 36 percent of the nation's White college students, whereas Black community college enrollment is 43 percent, Hispanic student enrollment 55 percent, Asian enrollment 41 percent, and Native American enrollment 57 percent of their respective total college enrollments (Center for Education Statistics, 1988b, in AACJC, 1988). Since the number of underrepresented minority students who transfer to four-year colleges and universities has not measurably increased over the years, critics are looking to the community colleges for answers.

A third reason for concern with the transfer function has to do with the increasing role of the states in community college finance, coupled with increasing state demands for accountability (Breneman and Nelson, 1981). As state resources become more limited, colleges are being called on to justify their activities, especially in regard to transfer.

These growing pressures have led to accusations that community colleges are doing an inadequate job of transferring their students, that they are "for the vast majority...an endless detour off the path to a bachelor's degree," as a recent article in the Chicago *Sun-Times* maintained (flaherty, 1989). The main evidence advanced to support this accusation is the common definition of transfer rate — a measure of the number of student transfers relative to a college's enrollment. But community colleges do in fact transfer many students from increasingly diverse populations, even though most come to them for reasons other than transfer. A gap has thus been created between the reality of community college transfer success and public perceptions.

Is the transfer rate, as commonly defined, an accurate and fair measurement of community college success in transferring students?

This chapter examines this question both conceptually and empirically. At the conceptual level, a new transfer rate will be defined that more correctly reflects the extent to which community colleges transfer their students. At the empirical level, data collected from colleges of the National Effective Transfer Consortium (NETC) will be examined to ground the new transfer rate in the multiple realities of community colleges.

[4] The implications for minority students have been well documented in the literature (Alvarez, 1984; Chacon et al, 1986; Cohen, 1987; Fields, 1987; Richardson, 1985).

Problems with the Most Common Defnition of Transfer Rate

The NETC colleges are a diverse group which, though not statistically representative of community and junior colleges nationally, encompass a broad range of demographic, economic and political conditions. For example, Consortium colleges vary in size from a credit enrollment per term of about 2,400 to approximately 24,000 students; in the percentage of full-time students from about 19 percent to 50 percent; in the states in which they are located (13 states from Massachusetts to Hawaii); and in the extent to which they concentrate on academic or vocational/technical programs.

This diversity can be expected to produce a great deal of variation in transfer activity. Though measurement approaches vary from state to state, the level of transfer activity has most commonly been measured by dividing the number of students who transfer to four-year colleges or universities by the number of students enrolled for credit at the community college. This definition of transfer rate can be expressed as:

$$\frac{T}{E} = \frac{\text{Number of Transfers}}{\text{Total Credit Enrollment}} \times 100.$$

Using this definition (abbreviated as *T over E*), figure 1 shows the 1988 Spring to Fall transfer rates for 25 of the NETC colleges.[1] The figure reveals great variation in transfer rates among NETC colleges, with the lowest rate being 2.4 percent and the highest 10.8 percent. The next section will examine this variation. The most startling aspect of figure 1 is not the variation, however, but the general low level of transfer rates as traditionally measured. The average for this group of colleges is only about five percent.

In seeing this display, it is natural to ask: Why are the rates for these varied colleges so low? Many answers might be given. For example, community colleges serve a wide variety of students, many with goals other than transfer. While it therefore seems unrealistic to expect a high transfer rate, these measurements seem to suggest that about 95 percent

[1] The data come from a survey in which a random stratified sampling plan was used that differentiated students according to ethnic background, enrollment status, and credits completed; see Appendix A for details. Data for twenty-five of the twenty-eight colleges are used in this report, except where noted.

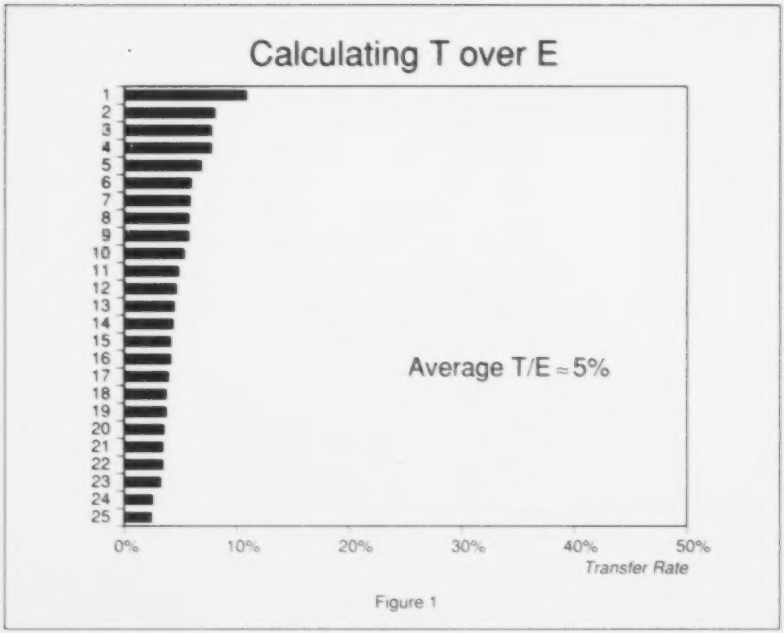

Figure 1

of all students do not transfer. This implication is simply wrong.

Perhaps the problem lies not in who transfers but in which students are counted in the base of the transfer rate (which is usually defined as all students enrolled for credit). Some students who take courses for credit have already earned their Bachelor's degrees. They should certainly be excluded from any consideration of transfer rate. Among the NETC colleges, a range of approximately 7 to 40 percent of credit students surveyed had a Bachelor's degree. When these students are removed from consideration, the transfer rate across the colleges changes from about five percent to approximately six percent. This adjustment helps clarify matters conceptually, but does not elevate the rate to a level that intuition suggests would more realistically reflect the transfer situation at most colleges. Some analysts have suggested a simple fix to the calculation of *T over E* by limiting the students considered in this formula to those who have a certain number of credits. This approach has some merit, though it founders on the hard reality of community college transfer patterns. For example, figure 2 shows how many credits students who transferred in Fall 1988 had accumulated by the beginning of Spring

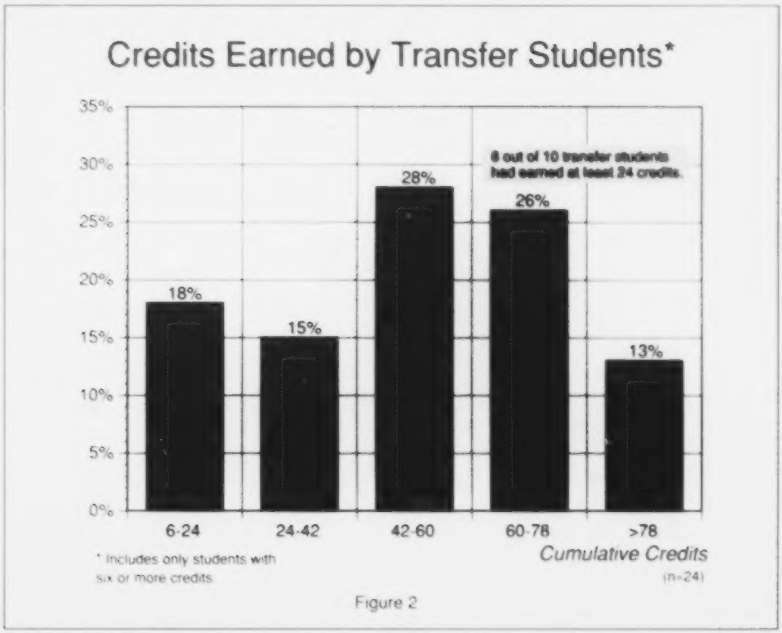

Figure 2

1988.[6] Though most students transfer after having earned about 60 credits, a large percentage transfer with fewer credits and many students transfer with considerably more than 60 credits. Therefore, considering the denominator for the transfer rate to be all students with a certain number of credits would fail to capture adequately the complexity of transferring patterns.

These data clearly indicate that *Tover E* yields an accurate answer to the wrong question: "What percentage of the total student body enrolled for credit in a given semester transferred in that semester?" Most enrolled students in a given term simply are not able to transfer at the end of that term, particularly those who have only recently enrolled in the college or have accumulated few credits. This common definition therefore artificially lowers transfer rates by inappropriately counting all enrolled credit students in a given semester in the denominator of the formula, regardless of whether they are able to transfer in

[6]Figure 2 excludes students with less than six credits at the beginning of the Spring 1988 term. For reasons discussed later in this chapter, our sampling plan for the student survey included only students who had earned six or more units of credit by the time they enrolled in the Spring 1988 term. Unless otherwise noted, statistics reported on NETC students, including transfers, are hereafter only for students who had earned six or more credits. "Number of credits" refers throughout the report to semester or semester-equivalent credits.

that semester. The definition of transfer rate needs more than an adjustment: it needs to be rethought.

Recent literature on community college transfer rates illustrates the difficulty in determining an accurate transfer rate because of the lack of clarity regarding who transfers and who can potentially transfer. McIntyre (1984) describes three possible definitions of transfer students: 1) one with an intent to transfer; 2) one with the capability to transfer; or 3) one with both the intent and the capability to transfer.[1] McIntyre calculated transfer rates for the California Community Colleges for 1983 using different enrollment populations as the denominator. He found dramatically different transfer rates depending on who was considered to be in the pool of potential transfers. Alternatively, Cohen and Brawer (1985, 1987) define transfer as a combination of intentions and behaviors. There is little agreement on how to define and/or measure student intent, capability, or behavior (Deegan, 1985; Cohen and Brawer, 1985, 1987). It becomes increasingly obvious reading the literature on transfer that a clear, consistent outcome measurement is needed in order to discuss transfer, and subsequently to improve the transfer function of the community colleges.

Defining a New Transfer Rate

Imagine a high school that enrolled a thousand students and had a respectable "college-going rate" of 50 percent. The college-going rate usually means the number of students who go to college divided by the number of graduates (i.e., the cohort of exiting seniors). Suppose the high school had four grade levels and that there were 250 graduates (exiting seniors) out of the total high school enrollment of 1,000. A 50 percent college-going rate would mean that 125 students were college-bound. However, suppose the college-going rate were computed not in this natural way, but in the same way that the community college transfer rate is commonly calculated. A very different and disturbing rate would result — namely, 125 "transferring" students divided by a total high school enrollment of 1,000, or 12.5 percent. This low "college-going rate" would undoubtedly cause consternation among

[1] We subsequently use "intent to transfer" as the base for formulating a measure of transfer *effectiveness*, which we believe is quite different from transfer *rate*. See Chapter 3.

parents and indigestion among school board members. But, as discussed previously, the transfer rate for community colleges is most often computed this way — with *all* students enrolled for credit as the denominator.[8]

This analogy suggests that transfer rate might be defined in terms of a cohort of students, instead of all credit enrollees. There are two relevant cohorts — entering and exiting students. One could take all credit enrollees entering in a given year and determine how many transferred after four or more years. This approach is far preferable to most current definitions, but it raises serious practical difficulties that render its use problematic for many community colleges.[9] Unlike high schools or four-year institutions, community colleges often have uneven and intermittent patterns of attendance, so that only a minority of students stay continuously enrolled for a fixed period of time (such as two, three or four years). For example, figure 3 shows the number of years that students were enrolled at NETC colleges by Spring 1988 before they transferred in Fall 1988.[10] Clearly, some students transfer within the first few years, the majority of those who transferred had done so by the end of the third year, and a surprisingly high percentage of students were enrolled for more than five years before they transferred.[11] Measures of transfer rate that limit transfer to four or even five years from an arbitrary entry date are thus bound to exclude many transfers. This uneven pattern of transferring is understandable because many community college students attend on a part-time, often sporadic basis, and some attend for several years before they decide on an academic program designed for transfer. To complicate matters even more,

[8] Moreover, enrollment as the base for calculating transfer rates does not make much phenomenological sense. For example, in computing the transfer rate for 1989, one would traditionally take the number of transfers in 1989 and divide that by the enrollment in 1989. Yet we know that it is literally impossible for most students first enrolling in 1989 to be transferring in the same year. One mechanical fix to this problem is to divide the number of transfers in 1989 by enrollment in 1988. We know, however, that most students take three or more years to transfer. Does this mean we should divide by enrollment in 1985, or by an average of three or four years? The problem is that enrollment is not a sensible base.

[9] The Center for the Study of Community Colleges in Los Angeles has been working with an entering cohort approach and hopes to solve its practical problems. Also see Adelman, 1990, and Peng, 1977, who are able to analyze entering cohorts using the National Longitudinal Study of the High School Class of 1972 (NLS/72).

[10] Years enrolled was derived from information provided by NETC colleges on the dates of first enrollment for their students. Some students have been taking classes relatively continuously; others have returned to the college with new goals after a long absence.

[11] The research team did not have access to data on years of enrollment for ten NETC colleges. The figure discussed above is for 18 colleges and thus may not be an accurate portrayal for the missing colleges. However, it does suggest that a sizeable proportion of community college students tend to remain enrolled (albeit for some on a non-continuous and part-time basis) for over five years.

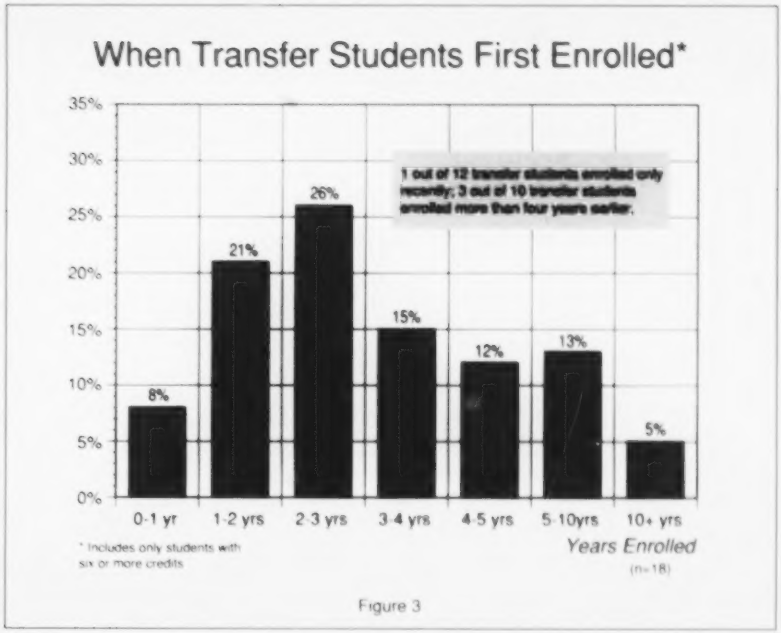

Figure 3

many students begin at one community college and then continue at another or even at a third college — that is, they become members of two or more "entering cohorts", which community colleges would find very difficult to sort out. These complex realities mean that the concept of "entering cohort" may have little practical application for most community colleges, and its use in transfer rate calculations would yield a sufficiently accurate estimate only under limited circumstances.

The high school college-going rate suggests another solution to the measurement issues inherent in the common definition of transfer rate: The denominator for transfer rate should be the "exiting cohort" of students in a term — that is, those students who were enrolled for credit in one term but did not re-enroll in the subsequent term. In this study, the exiting cohort consists of students who were enrolled for credit in Spring 1988 but did not re-enroll in Fall 1988. We call these students Leavers. Instead of *T over E*, we propose a new transfer rate:

$$\frac{T}{L} = \frac{\text{Number of Transfers}}{\text{Number of Leavers}} \times 100.$$

This formula — Transfers divided by Leavers (non-re-enrolling students) from one term to the next, or in short, *T over L* — should exclude students with BAs and those concurrently attending or on leave from a four-year institution. These students comprised about a quarter of the Leavers from NETC colleges (see figure 4) and will be removed from subsequent calculations, except where otherwise noted.[12]

This definition transforms the concept of transfer rate. It identifies transfer rate as the answer to a meaningful question: "What percentage of students leaving community college go on to four-year institutions?"

figure 5 shows the dramatically different picture of transfer that occurs by shifting to *T over L*: Instead of an average transfer rate of about five percent using *T over E*, NETC members have an average of about 15 percent using *T over L*.

Before exploring the implications of using *T over L* as the new

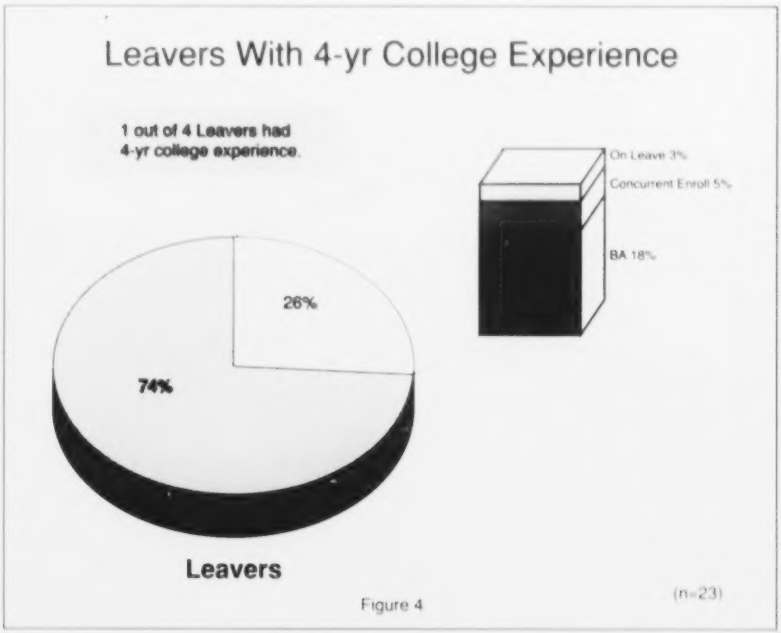

Figure 4

[12] Eight percent of the Leavers were either on leave or concurrently enrolled at four-year institutions. We recognize that some of these students are "reverse transfers" who have come to the community college to complete part of their lower division credits.

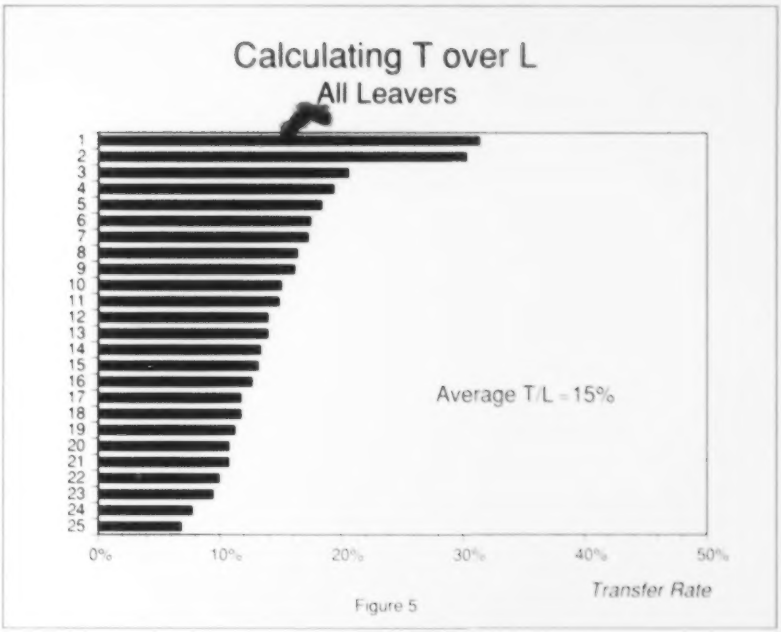

Figure 5

transfer rate, it is important to introduce another reality: Community colleges have a very high proportion of Leavers after the Spring term, and many of these students have completed too few courses to be eligible for transfer or have been enrolled for too brief a period to have benefitted from college transfer programs. Thus, figure 6 illustrates that about half of the students at NETC colleges who were enrolled in Spring 1988 did not re-enroll in the Fall. Figures 7 and 8 respectively show that approximately 45 percent of these Leavers had accumulated fewer than six credits when they enrolled in the Spring and approximately 40 percent had been enrolled for a year or less.[1] When Leavers who already have Bachelor's degrees or are concurrently attending or on leave from a four-year institution are removed from these calculations, the overall finding remains the same: On average, about half of the Leavers without four-year college experience had completed less than six units of credit at the time of their enrollment in Spring 1988, as shown in figure 9.

From the perspective of the transfer function, we believe that Leavers who have accumulated fewer than six credits when they enroll

[1] Data from 18 colleges were used in figure 8.

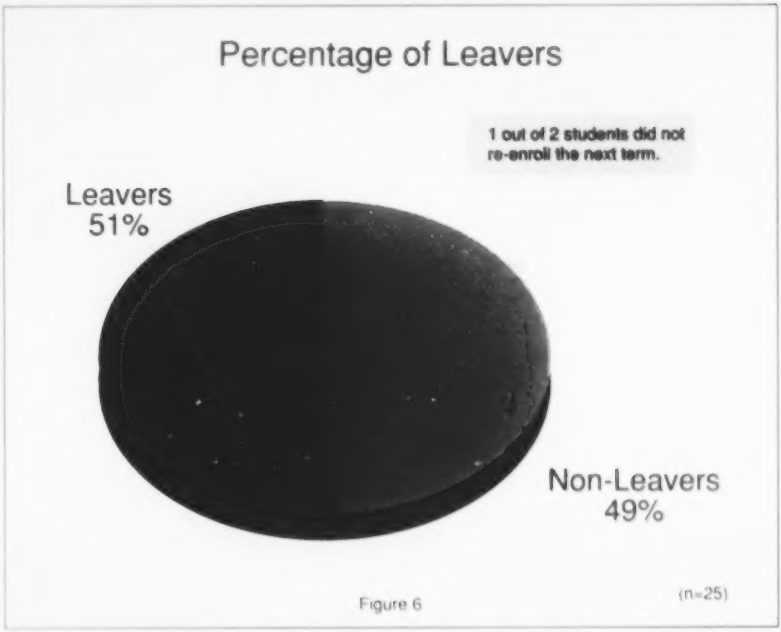

Figure 6

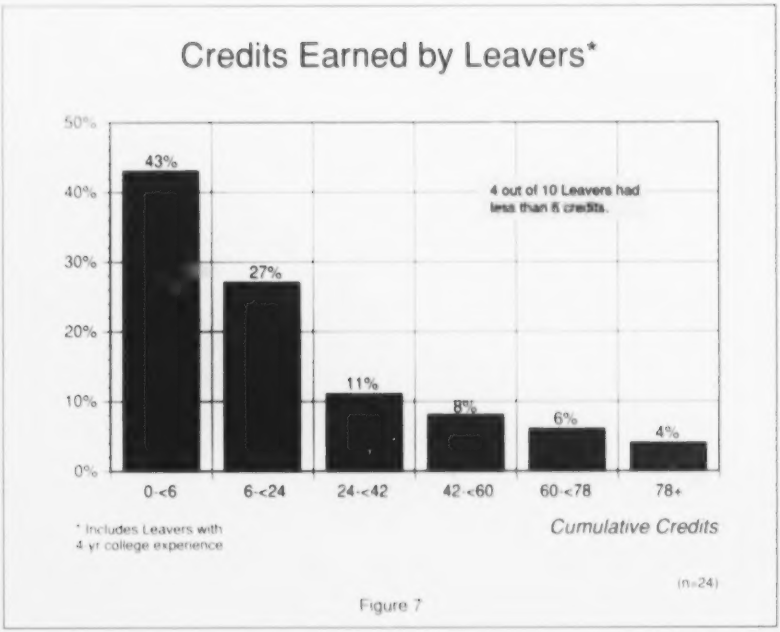

Figure 7

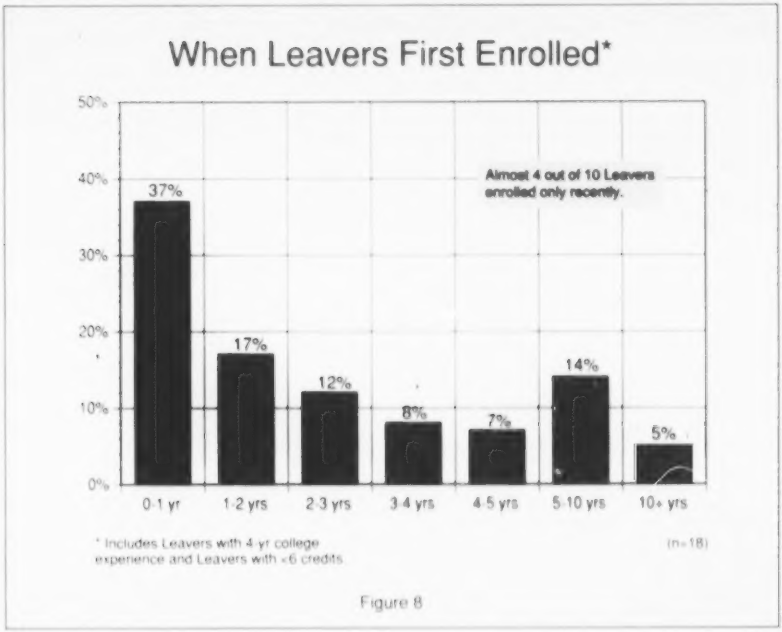

Figure 8

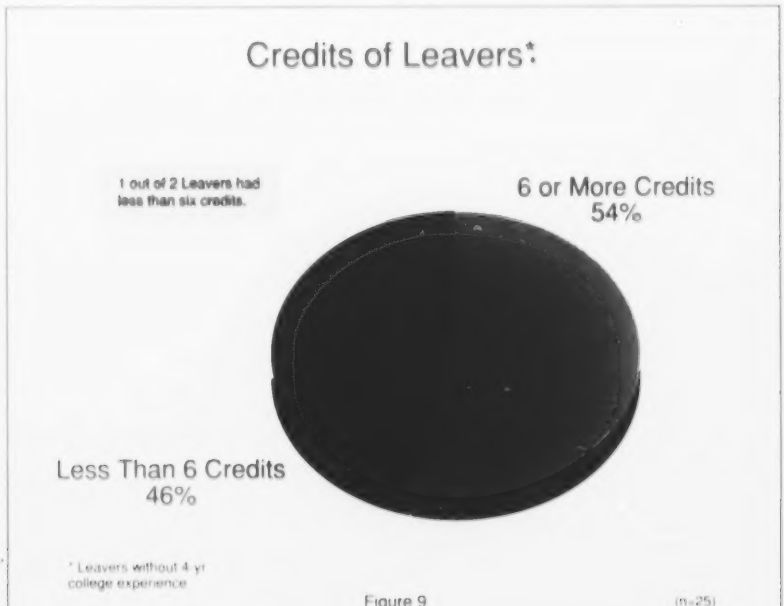

Figure 9

in the Spring ought not to be considered in the same light as those who have accumulated a larger number of credits. The former students have been enrolled for too short a time for the college to have had any significant impact on their transfer activities. Insofar as they do transfer, they can be credited to community colleges as transfer students only in a formalistic sense. Therefore, the calculation of transfer rate should include only students with six or more credits.

Figure 10 shows the new transfer rate, *Tover L*, for NETC colleges including only Leavers who had earned six or more credits as of their Spring 1988 enrollment. NETC members have agreed to adopt this standard as the new definition of transfer rate. The average transfer rate is about 25 percent, with a range of variation going from 12 percent to over 40 percent. We believe these statistics more accurately reflect transfer activities at the colleges.

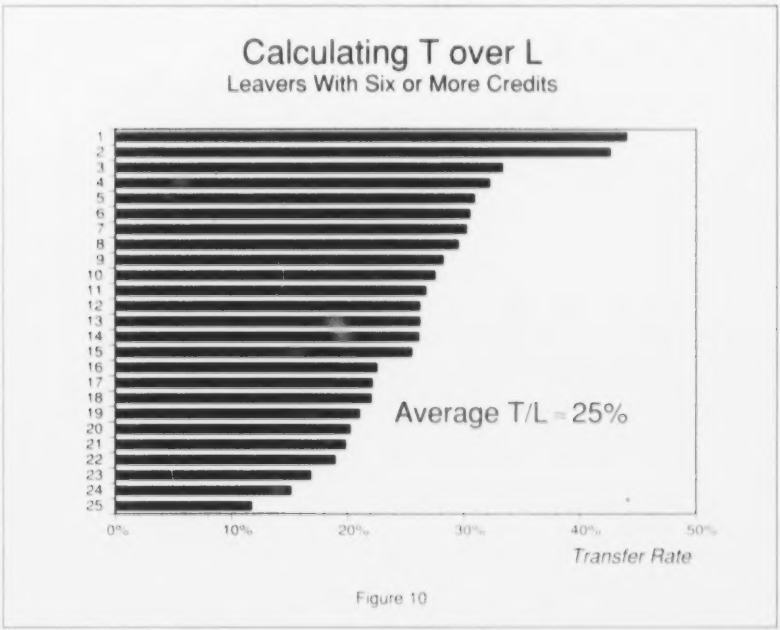

Figure 10

A Postscript on the New Definition

We gathered data at one NETC college to see how excluding Leavers with less than six units of credit might change the transfer rate

calculation. Figure 11 indicates that only a very low percentage of Leavers with fewer than six credits transferred. To exclude students with less than six credits from the calculation of transfer rate does not mean that these students should not be a focus of concern for the transfer function. On the contrary, the data suggest that many NETC colleges experience considerable student turnover and are unable to retain a large percentage of "beginning" students long enough for them to become involved in an academic program that could lead to transfer.

Another note on interpreting the transfer rate: Outside observers too often see transfer as competitive with vocational activities when they are both vital missions of community colleges. Among NETC members, some colleges focus heavily on an academic program, whereas others have large vocational/technical programs. We thus should *not* expect all, or even a high percentage of Leavers to transfer at many colleges. Figure 12 illustrates the variety of activities Leavers pursue other than transferring. At colleges with large vocational/technical programs, many students obtain a degree or certificate related to their vocation, and other students satisfy specialized needs for job-related skills. Moreover, comprehensive community colleges also have

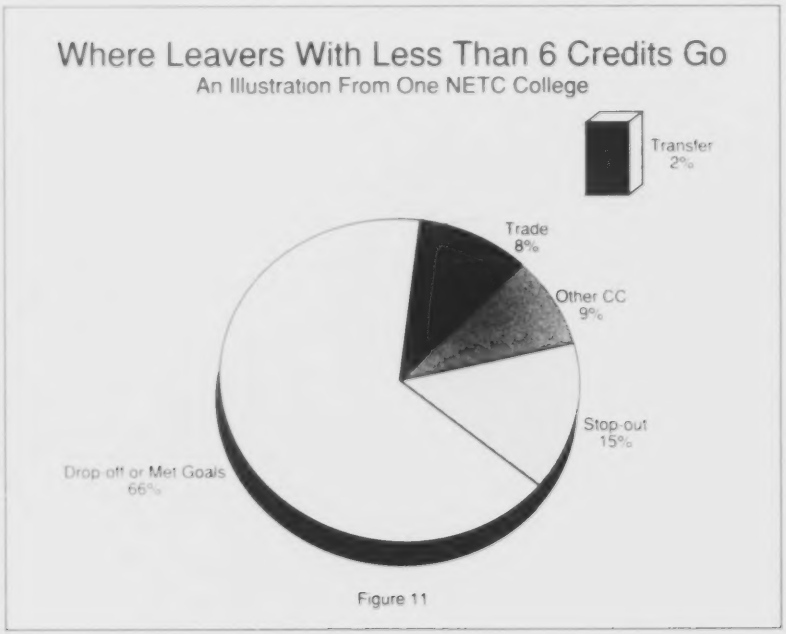

Figure 11

Figure 12

a substantial portion of their students who have met job-related goals at the community college and, therefore, end their enrollment. Figure 13 provides empirical data to further explore this observation. The figure shows the activities of students who had earned six or more credits by Spring 1988 but did not re-enroll in Fall 1988. Twenty-five percent transferred (which is the average *Tover L* for NETC colleges). On the average, seven percent of Leavers transferred to another community college, and three percent to a trade school. The largest majority (65 percent) were not attending school in the Fall.

Of those not attending school, three groups can be distinguished. First, some students appear to have "completed" their community college work, with nine percent planning to transfer eventually to a four-year college, and eight percent not currently planning to receive further schooling because they had met their goals. Until we collect additional longitudinal data, it is prudent to consider them as "completers". A second group of students who did not return in the fall said they plan to re-enroll either at the college they were at in the Spring 1988 (27 percent), or at another community college (four percent). Once again, only time and additional data collection will reveal how many students will return and how soon they will re-enroll. The third

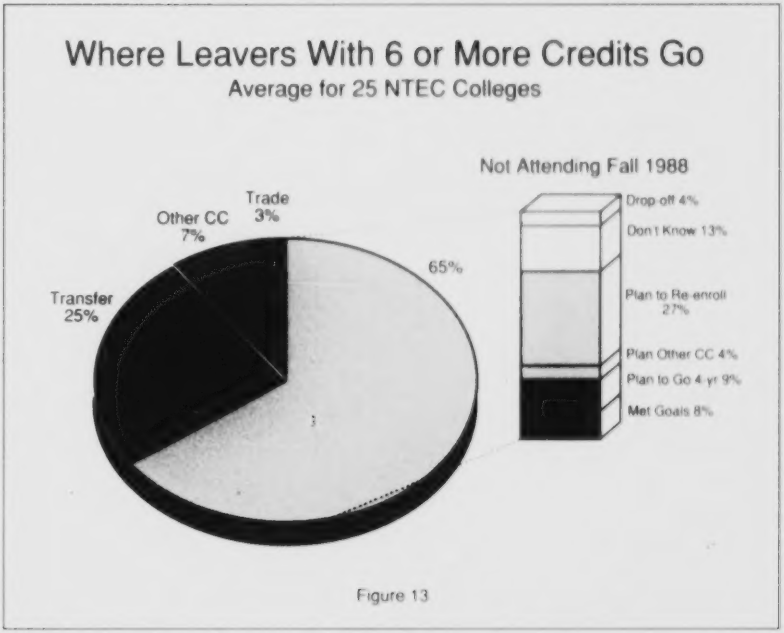

Figure 13

group of students (17 percent) appears to have dropped-off in the sense that they are not attending community college, have not met their goals, or do not know what their future plans might be.

Both these data and common sense thus suggest that a measure of "vocational completion rate" should be developed to stand alongside the new transfer rate. To do so, the second phase of our research will:

- measure V, the number of students who have left the community college after having satisfied their vocational program, and
- calculate the ***Vocational Completion Rate = V over L.***

Each college will thus have a quantitative measure of its vocational completion rate to complement the new transfer rate, *T over L*. By so doing, a richer and more balanced picture of community college accomplishments can be portrayed.

Though *T over L* provides povides powerful advantages for measuring transfer, no single measure can capture the complexity of community college transfer activity; a variety of complementary measures can weigh various dimensions of the transfer function. The ultimate value of *T over L* depends on its usefulness to community colleges as they work on accessing and managing their transfer programs. The following chapters further explore the applications of *T over L* for these purposes.

2

Expected Transfer Rates

This study seeks to clarify the transfer issue. We began with rethinking the transfer rate. As commonly formulated, the transfer rate has two problems. First, the most commonly used measure of transfer rate is not a valid indicator of transfer activity for it employs an inappropriate base — all credit enrollees. Our first task was to develop *T over L*, which provides a more accurate indicator of transfer activity. Second, transfer rate (however calculated) has generally been interpreted as a measure of the effectiveness or success of a college, with a low transfer rate meaning poor performance and a high one suggesting good performance. This interpretation is misleading. It distorts the fundamental reality of community colleges: They are public institutions subject to conditions beyond their control which largely determine the level of transfer that is possible. Some community colleges have conditions favorable to transfer, whereas others do not and consequently have low transfer rates. In short, *transfer rates should be not be viewed as a measure of transfer effectiveness, but of transfer activity.*

To further clarify the transfer function, we consequently need to:

- create a range within which a community college's transfer rate might be expected to lie, based solely on the conditions facing the college;
- develop a measure of transfer effectiveness, separate from transfer rate, which reflects a college's transfer efforts rather than its conditions.

This chapter deals with the first task; the next chapter concerns the second objective.

BACKGROUND CONDITIONS AND EXTERNAL FACTORS

NETC colleges differ from one another on many critical factors. During our fieldwork, we sought to identify these factors and understand the extent to which they affect the colleges' transfer function. Figure 14 presents a model of factors that we believe play a crucial role in determining a college's transfer rate.

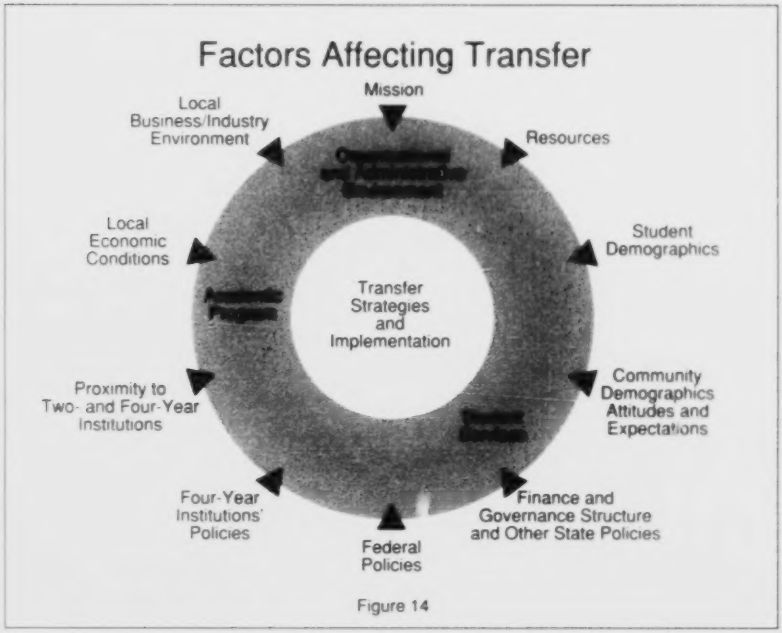

Figure 14

The model consists of three concentric rings of factors. The innermost ring refers to practices that colleges employ to support their transfer function. Chapter V discusses practices that we believe may be effective in increasing transfers. The middle ring identifies organizational conditions that affect transfer and are under the control of the college. For example, we believe commitment on the part of the administration to developing and maintaining quality transfer pro-

grams can have a major impact on transfer. We call these factors foreground conditions because the college leadership and faculty can influence them. Chapter IV discusses foreground conditions.

The outer ring concerns background conditions, or factors that are generally not under the control of the college but rather form the operational context of the college. Every community college operates within a broader setting of complex legal, fiscal, economic, demographic, regulatory and social factors that influence college policies and programs. These factors — the "external context" for each college — fix the boundaries of what it is possible for a college to achieve in its transfer education program. (Among the most important demographic external factors are the high school backgrounds and other characteristics of students — see Adelman, 1990.) Because there are innumerable ways in which these factors can interact, each college context differs in important ways from all others, and the influence of external factors on college policies is difficult to measure. Nevertheless, it is possible to discern general patterns, and this understanding can help us to ascertain whether, other things being equal, it is reasonable to expect a college to have high rates of transfer or whether more modest expectations are in order.

After examining information from all NETC colleges, we have reached the following conclusion: *External factors largely beyond a college's control (such as student demographics, community demographics and expectations, state laws and regulations, proximity to four-year institutions, and other factors shown in the outer ring of Figure 14) determine a range within which a college's transfer rate can be expected to lie.*

Consequently, not all colleges should be expected to attain the same transfer rate. Each college can be thought of as having an ***Expected Transfer Rate*** within a range determined by external factors. Since colleges have very different settings, their transfer rates should be quite different from one another. The difference between a college's actual transfer rate and its *Expected Transfer Rate* is an indication of the effectiveness of the college's transfer activities.

Calculating Expected Transfer Rates

Since this study reports analysis from only the first year of data collection, we have not been able to conduct a definitive examination of how

the variety of external factors statistically contribute to a college's *Expected Transfer Rate.* To date, we have completed promising but still preliminary analysis aimed at calculating *Expected Transfer Rates* for NETC colleges. The data show that colleges with a high percentage of full-time students tend to have higher transfer rates than colleges with a low percentage of full-time students. This correlation is not accidental. Some of the same external factors that influence transfer rate also affect the percentage of full-time students at a college. For example, students' high school backgrounds are highly related to the likelihood of their attending community college on a part-time or full-time basis. The percentage of full-time students thus represents a proxy for the influence of those external factors, and, consequently, knowing a college's percentage of full-time students allows us to estimate its transfer rate.

Figure 15 demonstrates this relationship. Each point in the figure represents one NETC college's percentage of full-time students and its transfer rate. The straight line represents *Expected Transfer Rates* — that is, the transfer rates we would expect based on the colleges' percentage of full time students. The curved lines around the straight line signify statistical uncertainty, or, put more plainly, the range

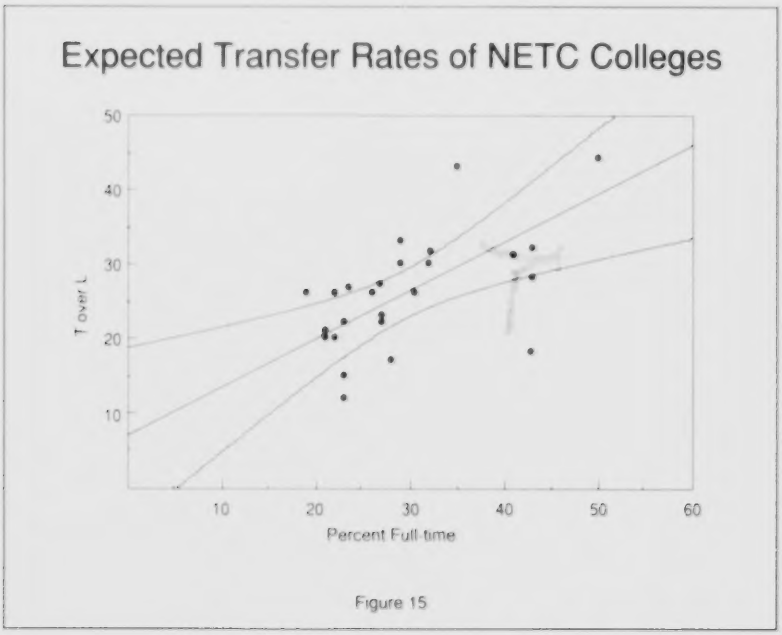

Figure 15

within which a college's transfer rate is expected to lie.[14] If a college's actual transfer rate is above the curved line, one could surmise that its transfer activities are quite effective; if a college's transfer rate is below the curved line, its transfer rate is lower than what its setting suggests it could be, and its transfer activities may need careful examination.[15] Lastly, a college with a transfer rate within the curved lines might be pleased, though not content, with this accomplishment. Its transfer activities are sufficiently productive to maintain the college within its expected range — an often difficult task in today's changing student environments.

SUMMARY

State officials, local governing boards and the public currently have no way of making sense of the great variation in transfer rates across community colleges. Without knowing what it is reasonable to expect of the institutions they govern and support, they are naturally inclined to believe that (1) all colleges are inherently capable of transferring students at rates achieved by colleges with the highest transfer rates in their state, and (2) colleges without such high transfer rates must be ineffectual and deserving of criticism. Moreover, community college administrators and faculty, lacking any realistic standard against which to assess the meaning of their colleges' transfer rates, cannot know whether they are doing reasonably well or need to re-examine their programs.

Thus, whether the issue is accountability or self-improvement, *Expected Transfer Rate* provides a tool to place each college's transfer rate into the perspective of what is possible in its own context.[16] If community colleges are to be held accountable based on performance,

[14] The relationship between the NETC colleges' percent of full-time students and their transfer rates is statistically quite strong, as indicated by a correlation coefficient of .70. Since the NETC colleges are making special efforts in this area, they could well have higher transfer rates as a group than community colleges nationwide. Consequently, the line of *Expected Transfer Rates* may be higher than the average for comparable colleges nationally. When this database is extended to more colleges, the data available for statistical analysis will be much stronger, and we will be able to estimate a more accurate line of *Expected Transfer Rates*.

[15] An unusually large number of full-time students enrolled in non-transfer vocational/technical programs could also lead to a lower than expected transfer rate.

[16] The individual reports to NETC members discuss reasons for the difference between a college's actual and expected transfer rates.

it is essential that decisionmakers judge college accomplishments in light of the external conditions they face. The *Expected Transfer Rate* measure will enable them to make an appropriate and balanced assessment for these purposes. And if college administrators and faculty are going to plan and implement programs that truly meet the needs of their students, they must have a realistic basis on which to judge the impact of their existing programs. Some colleges with low transfer rates may actually be doing well, considering their external contexts; others with high transfer rates may not be doing as well as they should. The *Expected Transfer Rate* measure can provide the basis for a practical assessment — and for avoiding either inappropriate concern or false optimism.

3

Transfer Effectiveness

The *Expected Transfer Rate* for a college is predicated on external factors described in the previous section. We believe a college's actual transfer rate falls above or below its expected level because of the effectiveness or lack of effectiveness of its transfer activities. Transfer rate and transfer effectiveness are therefore distinct concepts, with the former largely determined by external factors and the latter heavily dependent on the transfer strategies and organizational practices of the college. This section offers a conceptualization of transfer effectiveness and describes our preliminary efforts to measure the effectiveness of transfer activities at each college.

Propensity to Transfer

We asked students at each NETC college to indicate how important transferring to a four-year college was for them in attending community college. This question is a rough indication of a student's propensity to transfer. Figure 16 shows that on average across NETC colleges 44 percent of all students (with six or more credits) responded that transfer was an important reason for attending community college. Considering the diversity of NETC colleges, this average is somewhat misleading because the minimum percent for a college is 31 and the maximum is 62. More significantly, different types of students within the same college revealed very different relationships between their propensity to transfer and whether they actually transferred.

For Leavers (non-re-enrolling students with six or more credits) the average percentage who said transferring was important was 41 percent.

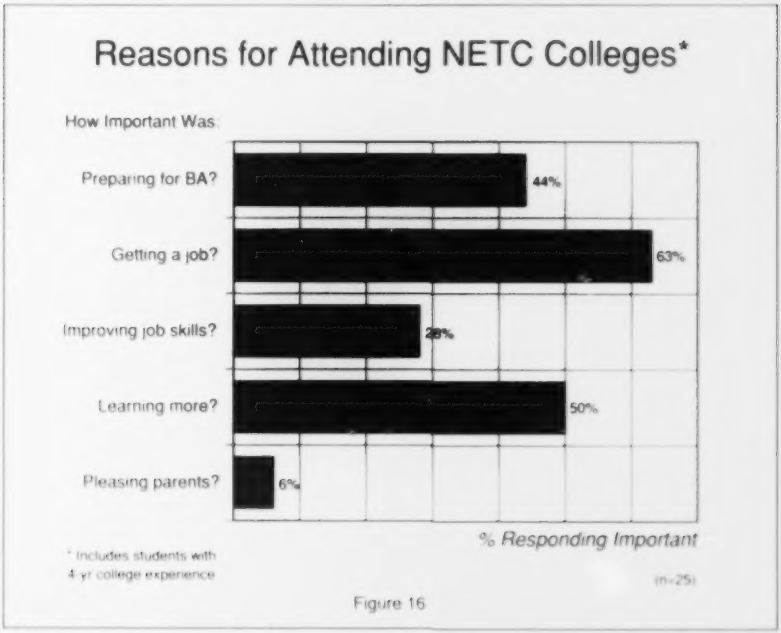

Figure 16

We consider these students as those likely to transfer. Some of these students in fact transferred — we call them *Type I* students; others did not re-enroll and did not transfer, despite the expectation that they would (or eventually will) transfer — we call them Type *II* students. Figure 17 shows that 20 percent of the total Leavers were *Type I* and 21 percent were *Type II*. In other words, about half of those students who did not re-enroll in Fall 1988 and had considered transfer to be important in fact transferred.

Most Leavers (59 percent across NETC colleges) said that transferring was not an important reason for attending their community college. Of these students, the vast majority did not in fact transfer — we call them *Type IV* students — and they represent about half of all non-re-enrolling students. The existence of *Type IV* students is neither a failure of transfer programs nor of community colleges; it is after all unreasonable to expect all students to transfer. On the contrary, some of these students met their goals and completed their community college work; others may re-enroll at a later date. Moreover, colleges that have strong vocational/technical programs can be expected to have a higher percentage of *Type IV* students than other colleges. Thus, one NETC college had 66 percent *Type IV* students, whereas another

Transfer Goals and Transferring

Leavers Who:	Transferred	Have Not Transferred
Considered Transfer Important	*Type I* 20%	*Type II* 21%
Considered Transfer Not Important	*Type III* 7%	*Type IV* 52%

Figure 17

NETC member had only 33 percent.

Rather than thinking of *Type IV* students as constraining the number of potential transfers, they can be thought of as a source of transfers. Both our fieldwork and the questionnaire clearly show that some students were originally *Type IV* — that is, they did not intend to go on to a four-year institution — but nevertheless they transferred. We call such students *Type III* students. On average across NETC colleges, seven percent of non-re-enrolling students were *Type III*, with one college having as low as three percent and another having as high as nineteen percent.

To summarize our proposed classification of students:

A *Type I* student is expected to transfer and does so;

A *Type II* student is expected to transfer and does not do so;

A *Type III* student is not expected to transfer, but does so;

A *Type IV* student is not expected to transfer and does not do so.

Who are *Type III* students? They are often re-entering women, minority students from ethnic groups which traditionally have been underrepresented at four-year colleges, students from poor back-

grounds whose parents had not completed any postsecondary education, and older people seeking new opportunities. Their academic aspirations are typically limited when they enter community colleges, but a connection somehow takes place — at times described as a life-changing "miracle" by our respondents — that expands their horizons. They see themselves for the first time as capable of becoming highly proficient in an occupation that requires a high level of skill and knowledge. In the 1990s, the nation will increasingly look to the community colleges to create this "miracle" for more and more non-traditional transfer students, thereby providing their bridge to a more prosperous future.

Though the pool of such students is great — as the high percentage of *Type IV* students quantitatively suggests — many community colleges have thus far been unable to tap into this reservoir at their own campuses. The largest source of transfers naturally comes from (*Type I*) traditional students — often younger, recently graduated from high school, and from ethnic groups and family backgrounds with established patterns of academic achievement. It is essential for community colleges to continue to serve these students; indeed, the colleges must improve their capacity to do so. Within the group of *Type II* students are some who may not be receiving the information, counseling, and assistance they need in order to enter and remain in a program that will lead to transfer, despite their desire to transfer. The help they need is often very different from that required by the *Type III* student. To develop and maintain effective transfer programs, community colleges must therefore identify, target, and design different transfer activities for *Type II* and potential *Type III* students.

Therein lies the conceptual value of the classification presented above: by differentiating between the distinct transfer needs of their students, community colleges can better design transfer activities and adjust them as the diversity of their students increases. **One way to improve the effectiveness of transfer activities is therefore to identify potential *Type II* students, find out why they may not transfer, and undertake activities that assist them to transfer.** In addition, **transfers might be increased by tapping into the large number of students who are not considering transferring, identifying from this group those who are potential *Type III* students, and designing transfer activities tailored to meet the needs of these students.** The next chapter will discuss effective transfer strategies that may assist this process.

DEFINING TRANSFER EFFECTIVENESS

How can the overall effectiveness of a community college's transfer activities be measured? The preceding discussion suggests that overall effectiveness should be thought of as the combined measure of a college's success in transferring different types of students.

The literature's efforts to devise a suitable definition has run into many difficulties, in part because transfer effectiveness has been equated with transfer rate.[17] Moreover, various definitions based on students' transfer intentions have ignored students who did not have an intention to transfer when they entered community college but who nonetheless transferred — our *Type III* student. A more inclusive definition can be based on the following formulation:

> ***Transfer Effectiveness* is the number of Leavers who transferred divided by the number of Leavers who felt transferring was important (multiplied by 100).**[18]

This idea can be operationalized by noting that the number of Leavers who transferred equals the number of *Type I* students plus the number of *Type III* students, and the number of Leavers who felt transferring was important is the number of *Type I* students plus the number of *Type II* students. Therefore,

$$\textit{Transfer Effectiveness} = \frac{\#\textit{ Type I} \text{ students} + \#\textit{ Type III} \text{ students}}{\#\textit{ Type I} \text{ students} + \#\textit{ Type II} \text{ students}} \times 100.$$

This definition equips community colleges with the means for calculating how effective their transfer activities are for all types of students. It does not handicap community colleges for having a large number of students who do not view transferring as an important reason for attending community college. Instead, it provides a bonus for those community colleges that motivate and enable students to transfer even though they had not considered going on to a four-year institution.

Using these concepts and applying student answers to our questionnaire as described in the preceding section and Figure 16, we have made exploratory calculations of *Transfer Effectiveness* for NETC

[17] The literature has wrestled with this problem for some time, as our review in Chapter 1 indicated. See McIntyre, 1984, and Cohen and Brawer, 1985 and 1987.

[18] For all the reasons reviewed in the discussion of transfer rate, this definition should be limited to Leavers who had six or more credits at the time of their enrollment in the Spring term.

colleges for Spring to Fall 1988 transfers.[19] Figure 18 shows that the average *Transfer Effectiveness* is about 66 percent, with a range of effectiveness from under 40 percent to over 120 percent. *Transfer Effectiveness* exceeds 100 percent for some colleges because they transferred a relatively high percentage of *Type III* students.

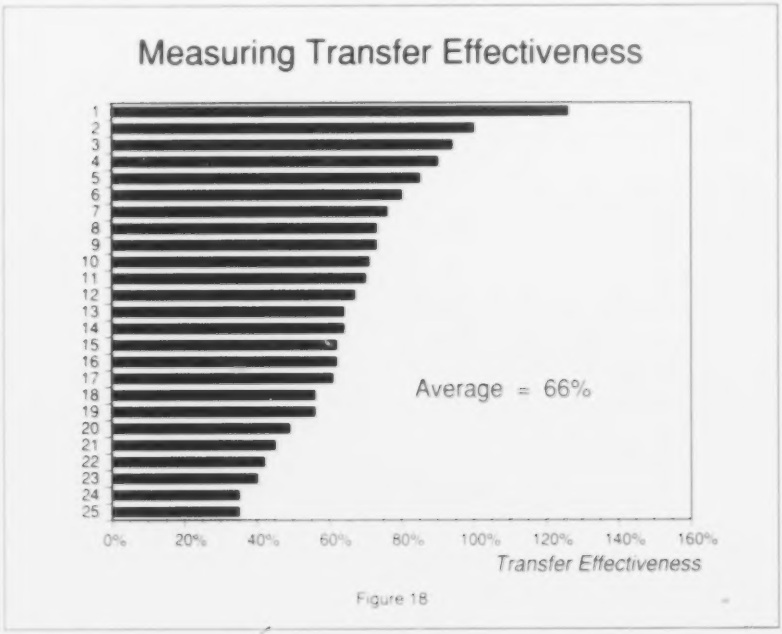

Figure 18

Assessing a College's Transfer Effectiveness

Measuring *Transfer Effectiveness* is important in its own right as a means for a college to evaluate how much its transfer activities are benefitting different types of students. It also has broader implications for

[19] We consider the measurement of the various student types and transfer effectiveness to be quite exploratory. Our main purpose has been to develop the concepts and to apply data that could provide insight into how the concepts might be measured. The next phase of our research effort will focus on formulating questionnaire material that can better tap these important concepts.

comparing institutions. For this purpose, *Transfer Effectiveness* provides a third comparative tool for measuring the transfer function. The first tool — the transfer rate — is a measure of the relative number of transfers regardless of a college's context or its efforts. Our transfer rate measure *(T over L)*, though much fairer and more accurate than other definitions, shares one of their limitations: It may place community colleges who focus primarily on vocational/technical programs at a political disadvantage because the rate tends to be lower for such colleges. The *Expected Transfer Rate* addresses this inequity by providing a means to show a college's transfer rate relative to an expectancy range based on external factors affecting the college. However, *Expected Transfer Rate* concerns transfer activity, not transfer success. We have now advanced a measurement of success using *Transfer Effectiveness.* This measurement does not penalize vocational/technical schools, but rather rewards colleges (regardless of their pool of vocational/technical students) who enable any student to transfer regardless of whether he or she originally intended to pursue a four-year degree.

This triad — the new transfer rate (*T over L*), *Expected Transfer Rate*, and *Transfer Effectiveness* — together offers a balanced set of measurements to assess colleges' efforts and successes within the constraints of their environments. We believe community colleges will be able to improve the transfer function in the coming years as they develop the capacity to make these multiple measurements.

4

Effective Transfer Colleges

While much has been written about the need to increase the number of transfers, and the need for improvements in transfer education, very little is known or is written about how to improve transfer activities. Barriers to transfer that have been discussed include strained relations between two and four-year institutions (Rollyson, 1986; Thomas, 1988), absence of faculty involvement in transfer activities (Berger and Ortiz, 1988; Seidman, 1985), dearth of course comparability and articulation agreements (Bogart and Murphey, 1985; CPEC, 1987; Kintzer and Wattenbarger, 1985; Smith, 1982; Woodbury, 1988), inadequate student services supporting transfer (Atkinson, 1987; Schinoff, 1983; Thurston, 1983), and the lack of effective retention strategies (Astin, 1975; Haffron-Bers, 1986; Turnbull, 1986; Voorhees, 1987; Walleri, 1986; Webb, 1988).

This focus on barriers to transfer — and on seemingly endless ways community college transfer efforts can fail — provides necessary critiques, but does not answer the crucial question: How can colleges enhance their transfer effectiveness, given the variety of conditions they face?

A positive approach is needed to address this issue. The K-12 research literature discusses a technique for examining "effective schools" based on the idea that some schools do extraordinarily well when the difficulty of the conditions under which they function is taken into account. By examining these schools, it has been found that effective strategies can be documented and therefore made available to other schools seeking to become more effective. This study employed a similar methodology. Using the *Expected Transfer Rate* calculations (see Figure 15), we identified NETC colleges that had rates higher than might be

expected on the basis of their external conditions. Because those calculations are in an exploratory stage until more data are collected, we also identified NETC colleges with high *Transfer Effectiveness* (see Figure 18). Combining these two groups (there was considerable overlap, of course), the research team examined the transfer practices of these "effective" transfer colleges, and asked why and in what ways these colleges were different.

We found much variety and many productive practices among these effective transfer colleges, but one conclusion stands out: *There is no single or simple practice that will dramatically increase transfer.*

On the contrary, we observed transfer activities that were innovative and well implemented, but by themselves failed to have a significant and lasting impact on the overall transfer effectiveness of the college. In colleges that had higher than expected transfer rates (i.e., their transfer rate exceeded their *Expected Transfer Rate* level given their external context) and had high *Transfer Effectiveness*, we uncovered a multitude of activities — some loosely tied together, others centrally organized — that provided a foundation of support for the transfer function. The key characteristic of effective transfer colleges must thus be their ability to create a supportive organizational environment for transfer.

The balance of this chapter describes the nature of supportive organizational environments.

Internal Factors Affecting Transfer

Figure 19 repeats a figure from Chapter 2 that presents a model of factors affecting transfer. The middle ring in Figure 19 concerns internal college operations. We refer to these factors as *foreground conditions* because they are under the control of college administrations, as opposed to external factors — the background conditions — which profoundly impact all college activities.

In our examination of effective transfer colleges, it became clear that foreground conditions largely determine whether specific transfer practices are adopted and how well they are implemented.

There are three broad categories of foreground factors — those concerning a college's organizational and administrative environment, its general student services, and its academic program. Without

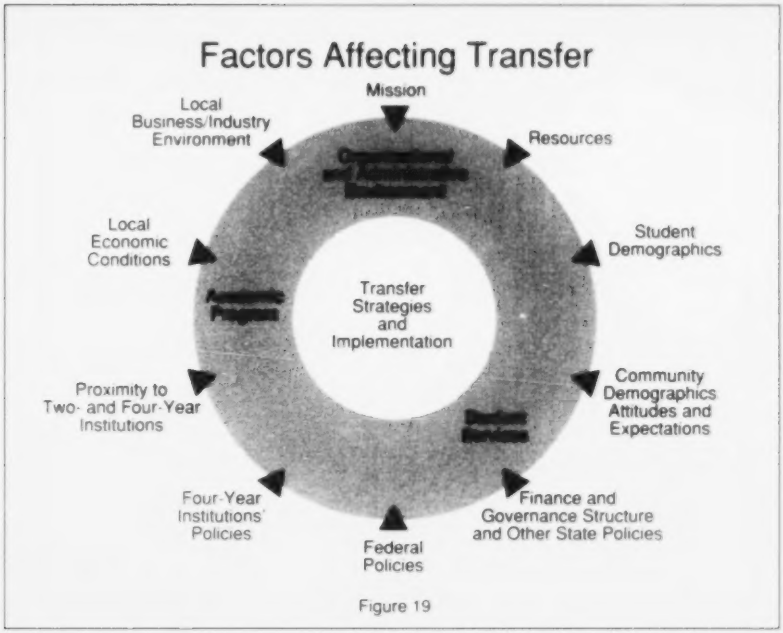

Figure 19

exception, the most effective transfer colleges had thorough, well-run student services and carefully planned academic programs with high standards. At the same time, our fieldwork suggests that some colleges with these characteristics were **not** as effective as might be expected (given their external conditions). In other words, well-run student services and quality academic programs appear to be *necessary but not sufficient conditions* for high transfer effectiveness. What appears to have been lacking in these cases was an organizational and administrative environment that fully supported transfer. This third factor seems to be the glue that bonds all other programs into a system capable of adapting creatively to changes in external conditions and mounting effective transfer programs. Since the literature about the general attributes of effective student services and good academic programs is so extensive,[20] our research focused on this third essential factor. The next chapter describes specific transfer-related strategies and practices involving student services and the academic program.

The discussion below identifies organizational and administrative

[20] See, e.g., Cohen, et al., 1986; Seidman, 1985; AACJC, 1988b; Miller, 1988; National Center for Developmental Education, 1986; Creamer, 1983; and Vaughan, 1983.

characteristics of effective transfer colleges. No single college had all the "ideal" characteristics; each college had strengths and weaknesses which varied over time as conditions and personnel changed. The following characteristics are therefore amalgams drawn from the strengths of the effective transfer colleges. In this way, the discussion below sketches our current understanding of ideal characteristics of supportive organizational environments for transfer.

1. **Focus on Transfer.** *At colleges with high transfer effectiveness, administrators, faculty, and support staff shared the belief that transfer is a high priority college mission* (even where many students are in non-transfer vocational/technical programs).

This belief was manifested in a variety of practical ways. At some colleges, the CEOs had made a public commitment to a specific increase in the number of students who transfer. At one college, this commitment had been coupled with increased funding for transfer program activities and the assignment of specific responsibility for transfer to a Vice President. At another college, courses designated as occupational education were funded at a higher level than other courses. Because transfer was a high priority, however, occupational education courses that also qualified for transfer could advertise that fact without losing their extra funding.

Wherever transfer was a high priority — regardless of the different ways in which this found practical expression — a focus on improving transfer education pervaded college planning and budgeting decisions at all levels.

2. **Cooperative Administrative Climate.** *In the most effective settings, there was cooperation and coordination of service delivery among administrative units that provide student support services and between academic and student services personnel.* College (and district) administrators in these cases allocated adequate resources to the transfer function, communicated their strong support for transfer-related services, involved a broad spectrum of faculty and administrators in all decisions that might affect transfer, and actively attempted to identify and remove barriers to effective transfer education. Where necessary, they became personally involved in making sure that the roles of the various student services offices were clearly defined and these operations were carefully integrated in order to maximize their combined effectiveness.

A practical step taken by some colleges, for example, was to have

counselors responsible for providing advice on transfer attend faculty/administrator curriculum committee meetings as observers. This practice enabled all parties to stay current. At one college, counselors and the campus vice-president provided orientation sessions for faculty on transfer and career issues. These sessions stressed the college's commitment to transfer, reviewed services available to students, and discussed ways in which faculty could help to advance transfer goals.

We observed that colleges with high transfer effectiveness tended to have unusual cooperation between the various institutional entities charged with planning and executing the academic program. Specifically, in effective transfer systems, academic and vocational/technical divisions and departments planned cooperatively to insure the implementation of an effective transfer education program.

At many colleges, for example, proposed new academic courses were reviewed for transferability before being approved by curriculum planning committees. This process has meant that faculty proposing new courses researched similar courses at four-year campuses, to make sure the proposed community college courses were equivalent and would qualify for transfer.

At one college, the "transferability test," imposed on every proposed new non-occupational course has led to contacts between two- and four-year faculty and the implementation of course standards that will satisfy a range of four-year institutions. At another college, departments have implemented a five-year curriculum review process that includes the faculty, department chairs, deans, and an external advisory board; this college has also used exit testing of students in order to provide information for curriculum planning. The purpose of the process has been to insure that academic standards remain sufficiently rigorous to meet the expectations and requirements of a range of four-year institutions.

3. Long-run Planning and Participatory Decisionmaking. *Highly effective transfer settings appeared to be characterized by an established process for long-run, campus-wide planning and participatory decisionmaking, with transfer as a high priority.* This process included identifying long-term goals, establishing measures for assessing progress, gathering data on college programs and student outcomes, and reviewing and refining college plans in light of goals and available information. Faculty and staff participated fully in selecting measures to assess progress, setting goals, and deciding what policies should be

adopted. This participation helped to insure widespread support for new policies, and broad cooperation in policy implementation. The planning and decisionmaking process had matured to the point where faculty and administrators could focus on transfer and related issues, rather than having to spend most of their time on issues of organizational maintenance (e.g., community relations, relations with bargaining units, facilities upkeep).

This planning and decisionmaking process allowed the most effective colleges to generate a broad awareness of changes (and prospective changes) in their student enrollment and demographic profile, to assess the strengths and weaknesses of their academic programs and student services for a changing student population, and to plan and execute needed changes. At one college, for example, a five-year plan published in 1988 specifies planning priorities; provides an assessment of the current status of college programs in each priority area; identifies important problems; presents an action plan with specific policies to address the problems; and delineates a detailed budget and timetable for policy implementation. Data developed for this college's plan showed that the average age of their students was increasing and that increased enrollments were projected for students with learning disabilities and students with English as a second language. Student attrition, particularly among academically and economically disadvantaged students, was identified as a major problem, particularly for "faculty who feel ill-prepared to understand and work through the problems encountered with this new population." As a result of this assessment, the college has formulated an action plan that includes revised and improved student assessment procedures (including expansion of assessment services to part-time and evening students), and new programs of academic advising, ESL instruction, and developmental education.

4. Collegial Professional Climate. The final component of a supportive organizational environment might be termed the collegial and professional climate. *In effective transfer settings, faculty and administrators agree on the institutional goal of increasing transfer, regard one another as colleagues, and work together to resolve problems related to transfer.* Faculty who need more training (e.g., in understanding the needs and learning styles of non-traditional students) in order to increase the effectiveness of transfer education are supported and encouraged to participate in a comprehensive program of faculty development.

Summary

An effective transfer college is one that has high transfer performance relative to the external conditions it faces. This study has developed an exploratory methodology for identifying effective transfer colleges. Using interview techniques and field observation during our site visits, we examined the characteristics of these colleges to formulate preliminary hypotheses about why they are effective. Our tentative conclusions are:

- Transfer activities constitute a system; no single practice can dramatically increase transfer.
- Well-run student services and quality academic programs are necessary but not sufficient conditions for transfer effectiveness.
- To develop and sustain high levels of transfer relative to external conditions, community colleges must create an organizational environment that supports the transfer system.
- Supportive organizational environments are characterized by a campus-wide focus on transfer as a high-priority mission; a high level of cooperation and coordination among administrative and academic personnel at all levels; long-run planning with broad participatory decisionmaking; and a collegial professional climate.

Within a supportive organizational environment, transfer effectiveness depends on how well a college implements specific transfer-related strategies and practices. The next chapter takes up this topic.

5

Effective Transfer Strategies and Practices

The preceding chapter pointed out that no system of transfer practices, no matter how innovative and well-executed such practices might be, is likely to have a substantial impact on a college's overall transfer rate without a supportive organizational environment in place. This chapter identifies strategies, practices and activities we observed that were designed specifically to address transfer issues. It was not possible to measure directly the effectiveness of these practices for increasing transfers. We nonetheless selected practices that could be helpful in the variety of operational contexts faced by NETC colleges.

These practices can be grouped into the following four areas that cover generic aspects of the transfer function:

- Relations with four-year schools
- Student services for potential transfers
- Technical support for the transfer function
- Relations with elementary/secondary education

The next sections discuss in turn potentially effective practices in each of these areas. The final section focuses on transfer practices for *Type III* students.

A. Relations With Four-Year Schools

We observed that community colleges with high *Transfer Effectiveness* had two common characteristics: (1) they had developed a climate of cooperation between their institution and the four-year institutions to

which their students generally transferred, and (2) they had worked out complete and detailed articulation agreements. In practice, these strategies were interrelated, with the latter highly dependent on the former. For the sake of clarity, however, the following discussion examines these strategies in turn.

1. Developing a Climate of Cooperation. In effective transfer systems, community college administrators, counselors and faculty had cooperative working relationships with their counterparts at key four-year institutions. There were, of course, many strategies for developing such relationships.

At a modest level of interaction, many community college staff worked closely with four-year campus representatives to arrange activities that introduce four-year institutions to community college students. At one community college, transfer counselors reviewed student transcripts with the admissions office of the local state university, and university outreach staff were then able to make a signed transfer commitment to qualified students when they visited the community college campus.

At a more intense level of interaction, faculty at several community colleges arranged meetings and conferences with four-year faculty in order to discuss curriculum, academic standards, and other requirements for transfer students. In a few cases, department chairs worked with their four-year counterparts in order to stay current on transfer requirements. At several colleges, community college counselors met with four-year counselors in order to exchange information and stay current on four-year requirements. In one state, there was a yearly meeting between representatives of all state community colleges and four-year institutions, for a broad exchange of information regarding transfer and related concerns, such as financial aid, the articulation process, or counseling support for students' transition to the four-year level. The agenda of this meeting was open to all participants to raise concerns for discussion. As a final example, a transfer guide has been developed at one college through meetings that began with all two- and four-year department chairs and interested faculty, followed by meetings between two-and four-year department faculty to work out details. The guide has been kept updated through follow-up meetings of the two- and four-year departments.

Some colleges have developed strategies to achieve even closer cooperation. The following examples summarize cases where joint

task sharing between institutions has been implemented.

- *At one college the chair of the Business Administration Department — an important transfer area — was also a member of the undergraduate curriculum committee for business administration studies at the local state university.*
- *At another college, community college faculty and deans sat on accreditation teams for four-year campuses, and vice-versa, in order to facilitate two-way understanding and help insure course comparability.*
- *At a third college, joint or shared academic advising and counseling for potential transfer students had been worked out between the community college and nearby four-year institutions. For example, a counselor in charge of articulation was paid half by the community college and half by a nearby state university where most transfers go. The counselor has been able to resolve a number of inter-institutional coordination issues, provide reliable advice to community college departments on the four-year course approval process and ways to strengthen courses to meet four-year requirements, and work with individual students on complex transfer problems such as multiple transcripts or courses completed out of state.*

2. **Establishing and Monitoring Articulation and Transfer Agreements.** It is widely recognized that articulation agreements serve as the foundation for a community college's transfer relationship with four-year institutions. When complete and up-to-date articulation agreements are in effect and clearly understood by students and counselors, students can be assured of transfer if they pass the required community college courses. Without such agreements, transfer is less certain, and students may find they have to complete additional coursework before they will be admitted to the four-year institution of their choice. Yet we found great variety in the quality of these agreements and in how useful they were in fostering transfer. We have concluded that the existence of agreements was necessary but not sufficient for obtaining effective articulation. More important was a cooperative and continuing process of consultation, monitoring, and review of agreements. A number of colleges assigned clear responsibility for pursuing articulation agreements with four-year institutions to a full-time campus administrator, or to a faculty committee

with adequate release time to be effective. However, the organizational responsibility for articulation was handled differently at different community colleges.

For example, at one NETC campus, a district-level articulation specialist worked with department chairs at four-year institutions to develop articulation agreements. At another college, a full-time campus articulation officer was responsible for developing and maintaining articulation agreements with all relevant four-year campuses — including coordination of discussions between two-and four-year departments, submission of community college course syllabi for four-year review, and follow-up to develop and update written agreements. At still another college, division deans had been made responsible for articulation.

Several colleges made special personnel assignments to maximize their articulation effectiveness. At one college, for example, advisors had specific four-year articulation assignments; each advisor was a specialist on one four-year campus and had general knowledge about others. Students who encountered particular problems with a four-year campus were advised by the specialist for that campus.

At a number of NETC campuses, transfer agreements that go beyond articulation had been worked out with four-year institutions. One college had formulated "contracts" with a number of four-year campuses guaranteeing admxssion to both the campus and the major for students who fulfill specified requirements. The contract required the student to complete a required set of courses, with a specified grade point average. Representatives of the community college and the four-year institution signed the contract, which guaranteed transfer if course and GPA commitments are met.

B. STUDENT SERVICES THAT SUPPORT TRANSFER

All community colleges provide a range of services for students. In this sub-section, we focus on services, and, in particular, strategies for delivering services, that are designed specifically to assist the transfer function.

1. **Centrally Coordinated Services.** A number of colleges developed a well-publicized and centrally located administrative unit with authority to coordinate transfer-related activities. A prime example is

the Transfer Center that we observed at several colleges. Transfer Centers provided a centralized location for information on transfer opportunities, outreach and assistance to potential transfer students. Center staff kept track of the progress of their student clients, made sure they received needed services, and worked to strengthen the coordination of student services available from other campus sources. They formed links to four-year institution admissions personnel, and helped resolve problems that came up in having students accepted for transfer. Some Transfer Center directors had major responsibility for the transfer mission and were charged with securing the cooperation of other units on campus.

2. **Academic Support and Advising for Transfer.** Several colleges with high *Transfer Effectiveness* provided specialized academic support for potential transfer students. Once again, practices varied greatly. The following strategies appeared particularly likely to yield positive results:

- *Many colleges used assessment, course placement, and advising procedures to help prevent students from enrolling in courses where they did not yet possess the skills needed to succeed. Placement test results were often used to direct students toward appropriate courses in math, English, and reading and direct them away from courses that demand high levels of reading comprehension, unless the students demonstrated the requisite reading proficiency.*
- *Several colleges created early warning and intervention programs. In these programs faculty identified students in academic difficulty and provided this information to counseling staff, who arranged for academic support (e.g., tutoring, labs, faculty or student mentors).*
- *A number of colleges coordinated their developmental courses with courses in their academic departments in order to provide a clear curriculum ladder from basic skills through advanced work. With this curriculum coordination, students enrolled in developmental courses could see that they were on a well-defined path to higher learning, and it was hoped that this would help prevent feelings of isolation and discouragement that often lead students to drop out of school.*
- *On some campuses, community college and state university students were hired as tutors to work with students needing academic*

support. At other colleges, students had access to some courses organized as open entry and exit classes, taught in half-unit modules. Some students also used a self-paced math lab, and a reading center that teaches ESL, speed reading, study skills, and college-level reading skills. At one college, four-year students were employed as tutors specifically to provide assistance in sophomore-level courses, which were particularly needed to complete transfer requirements.

3. **Transfer Counseling.** Several colleges separated academic advising from personal or career counseling. At all colleges, counselors played critical roles in the transfer function, though few colleges had the resources to use counseling as extensively and intensively as would be desireable. The need to make the most efficient possible use of available resources has led to innovative approaches such as the following:

- *At one college, advising staff were hired who do not have counseling credentials. This freed more counselor time to work with students on personal counseling and goal setting; provided peak load capacity for academic advising; gave students access to drop-in academic advising; and involved another group of professionals in helping students.*
- *A relatively unusual strategy involved the use of counselors to specialize in substantive areas across many four-year campuses; each counselor became an expert on one or a few programs (e.g., engineering, nursing) at all four-year campuses to which students usually transfer. All students with a particular substantive interest were counseled by the advisor with expertise in that area.*

C. Technical Support for the Transfer Function

In today's complex community college environment, a technical infrastructure is required to support effective transfer programs. However, building a technical support structure requires resources, and NETC colleges vary greatly in the extent to which they can commit resources to this area. The three major components of a technical infrastructure are student information systems, articulation databases, and research on transfer. The most effective transfer programs had all

three components in place and integrated with one another — that is, the technical infrastructure operated as a system that supported the overall transfer mission. For the sake of clarity, however, the following discussion reviews instances of effective practices for each component separately.

1. **Student Information Systems.** All NETC colleges had a computer-supported record keeping system and provided academic advisors with information on student course enrollment. The more effective programs had the capability of keeping up-to-date information and the ability to compare courses completed with courses needed for transfer. The following examples illustrate different techniques for developing useful student information systems:

- *At one college, a student database had been expanded to include courses taken at other community colleges, with historical records going back six years. The database enabled students and counselors to compare a student's record to any set of four-year campus requirements.*
- *At another college, a new management information system will combine admissions, registration, billing, degree audit, financial aid, and course history information on all students, including courses attempted but not completed. Counselors will be able to call up any of this student information on computer terminals in their offices.*
- *At a third college, counselors could obtain information from a degree audit system that could access any student record, current within a few days after grades have been posted or a course dropped. The system included financial aid and other data, and could flag student records to allow counselors to query the system. This allowed counselors, for example, to identify all students who were only a few courses away from transfer eligibility.*

2. **Articulation Databases.** All NETC colleges had articulation agreements with four-year institutions. However, it is not easy for colleges to maintain complete and up-to-date information on articulation agreements and other four-year transfer requirements. Only a minority of NETC colleges could do so. In the best cases, colleges were also able to make all articulation and four-year requirements readily accessible to all counselors, academic advisors, and students.

3. Research Related to Transfer. A number of NETC colleges have excellent research staff who conduct evaluations of transfer-related activities. In the most effective examples, the research activity was an integral part of the transfer function. In several cases, personnel had been assigned to conduct transfer-related research, and their job description specifically identified their task as transfer-related. The research activities varied but there appears to be the following foci:

- *A number of colleges collected information from four-year campuses on items that transfer applicants were missing from their files or applications. This information was turned over to community college counselors, who followed-up with student applicants to help them complete their applications.*
- *At some colleges, data were collected from four-year institutions on the academic progress of students who had transferred, and the data were analyzed to ascertain whether there were any patterns of academic weakness that should be addressed by the community college instructional program.*
- *At several colleges, students who had transferred were asked to provide information on the quality of their academic experiences at the community college, and the usefulness of the college's student services.*
- *A few colleges conducted research on the relationship between student course placement and academic success, in order to evaluate the quality of student assessment and counseling efforts. One college assessed the experiences of students who enrolled in courses against the advice of their counselors, to advance the counseling staff's understanding of what to tell other students considering the same step.*

D. RELATIONS WITH ELEMENTARY/SECONDARY EDUCATION

A relatively recent development in efforts to increase transfers begins prior to community college enrollment with activities aimed at high schools and even junior high schools. These activities largely take two forms: cooperation and outreach activities designed to increase recruitment, and coordination of curricula and academic programs

between community colleges and their feeder high schools. Though such activities are becoming more widespread, we found only a few situations where they had been well enough established to be effective. The following discussion illustrates the scope of activities reported to us.

1. **Cooperation and Outreach.** One college supported and contributed to selected high school and junior high school activities as a means of increasing college visibility and prestige among secondary school students. However, the more common relationship was less intensive, usually involving college administrators and student support staff developing cooperative working relationships with secondary school administrators and counselors. The examples below indicate the range of cooperative relationships:

- *At one NETC campus, college faculty and student support staff met regularly with elementary and high school students to motivate them to plan to attend college, and to consider community college transfer programs as an affordable path to a bachelor's degree. For example, college faculty met with high school juniors to advise them on what courses to take during their senior year to prepare for community college and eventual transfer.*
- *In another instance, a team consisting of community college and local four-year college recruiting staff visited high schools together. The four-year recruiter recommended the community college as an option for the first two years, and the community college recruiter discussed transfer opportunities.*
- *One community college summer program for 6th and 7th grade students emphasized the three R's and career planning. Faculty from another college taught advanced high school courses in fields where high school teachers were in short supply.*

2. **Academic Coordination.** A somewhat different form of cooperation between community colleges and secondary schools involved college faculty working with feeder high school and junior high school teachers to help insure that secondary school curricula and course content would prepare students for studies leading to transfer. For example, several colleges gave students credit for some high school courses, and worked with four-year campuses to get them to accept these courses toward transfer. To obtain such credit at one col-

lege, students had to pass the next course in the series at the community college, complete at least 12 units in the relevant academic area, and enroll at the community college within one semester of high school graduation (or by special permission). Faculty at another college met regularly with high school teachers to develop articulated curricula leading to transfer and discuss academic standards required for pre-transfer studies.

E. Effective Practices for Non-Traditional Transfers

An earlier chapter showed that all NETC member colleges have students who transfer even though they might not have been expected to go on to four-year institutions. We call these students *Type III*, or non-traditional transfer students. Our research revealed that:

- Potential *Type III* students who otherwise appear to have a low propensity to transfer include some ethnic minorities, older reentry students, low-income students, and students who are the first in their families to attend college. Demographic trends suggest that potential *Type III* students are increasing.
- The transfer practices that are effective for traditional transfer students (*Type I* students) may not adequately reach and affect students with a low propensity to transfer.
- Most NETC colleges succeed in transferring only a relatively low percentage of *Type III* students. Consequently, there exists a large pool of potential transfer students which, if tapped, could significantly increase a college's overall transfer rate.
- Most NETC colleges have only begun the difficult tasks of developing and implementing specialized outreach and support services for potential *Type III* students.

This area is thus of vital concern for the transfer function, but effective practices are only now being developed to meet the growing needs. Undoubtedly the single most important step is for the college administration to establish the transfer of non-traditional students as a major college-wide priority. In terms of implementing policy in this area, it appears that personal contact — between students and faculty, counselors, advisors, peers, mentors, and so on — is a crucial element

in a non-traditional transfer student's decision to follow a transfer program.

Despite the still evolving nature of activities in this area, there are current examples of solid and, in some cases, outstanding practices among NETC colleges that appear to be effective for potential *Type III* students. These practices tend to be grouped around specialized programs in three areas: student outreach, student services, and academic support.

1. **Student Outreach.** Several colleges have implemented specialized programs to identify, contact, motivate, and assist students from segments of the student population that have historically shown a low propensity to transfer. In the most common approach, special transfer information sessions were organized and students who might not otherwise be interested in transfer were sent personal letters of invitation. The following examples of innovative strategies also were observed:

- *One college offered a course in learning and thinking strategies that was organized specifically for students with low self-esteem.*
- *One innovative program used evening counseling staff to hold workshops on transition to college for non-traditional students, single women, and academically underprepared students. The workshops were held at satellite centers and the main campus, and were advertised in both the local and community college press. Counseling staff also worked with student organizations to reach students who had not considered transfer.*
- *Several colleges started programs to provide students who have low propensity to transfer with exposure to a college-going culture. These programs included mentoring, instruction on study skills, and exposure to the fine arts. In one such program, students and student organizations were involved in identifying, motivating and assisting potential transfer students.*
- *At one NETC member college, faculty participated directly in student outreach efforts by helping to identify potential transfer students, providing them with information, and motivating them to consider transfer as a viable option. Faculty seminars were held to interest faculty in identifying and motivating potential transfer students.*

2. **Student Services.** All NETC colleges offered some student services to serve the needs of special populations with low propensities to

transfer. At several colleges, the full range of student services was provided to evening students, and the evening and day curricula were quite similar. In particular, innovative approaches were being developed at a number of colleges to meet the needs of women who are returning to school. Special programs for academically underprepared students have also become common. For example:

- *At one college, a re-entry Women's Center provided academic advising; personal counseling; support groups; workshops; and credit classes on careers, goal selection, and personal development. The Center mailed information on its services to all woman students over the age of 25, and also provided peer counseling. The Center stayed open through the evening, and kept track of all students who made appointments to use Center services.*
- *At another re-entry center, students were assisted with admissions applications, financial aid, housing, child care financing and services, advising, and referral to other (college and non-college) resources. This center gave faculty-taught workshops on self-esteem, study skills, careers, and math anxiety, and did outreach to AFDC, business, and community groups.*
- *One NETC college gave scholarships to some students through a college foundation. In addition, special programs for minority students offered tutoring, advice on classes, peer and staff support, four-year campus tours, talks by students who successfully transferred, and other support services. Counselors did not wait for students to make appointments; they talked to all students being admitted in order to identify academically underprepared students before they enrolled in any classes.*
- *One college featured a project aimed at single parents and displaced homemakers. This project offered counseling, testing, help with scheduling, and information on day care, transportation, and financial aid.*
- *At a number of colleges, student clubs organized cultural events in order to involve students in the life of the college and break down barriers to communication.*

3. **Academic Support.** Many colleges have developed special academic support programs designed for students who may have little time to study, are under financial or other pressure to quit school,

have inadequate study skills, or do poorly on assessment tests. Some examples:

- *To improve retention and counteract family pressures to drop out of college, the mentor program at one college put students together with peer mentors once a week, and with faculty, staff and businessperson senior mentors as needed. Funds were being sought to expand this program to include a coordinator, advisors, and counselors, in order to provide a range of stable contacts for students who were at risk of dropping out.*
- *At some colleges, special academic support for athletes was provided (tutoring, academic survival skills, time management, transfer transition information) to counteract a tendency to concentrate on sports to the exclusion of studies. Special services were offered by an honor society on one campus; on another a coordinator was assigned responsibility for programs for athletes. The coordinator linked student support and academic services, and provided information about four-year campuses*
- *Several NETC members have worked out specialized transfer agreements with four-year institutions that are aimed at the transfer of potential Type III students. One college made an arrangement with a nearby state university to enable students in a special low-income assistance program to transfer with as few as 36 units.*
- *Another college was establishing a "minority alliance" program with four-year campuses that will guarantee admission to liberal arts transfer majors. The program will provide four-year student mentors, community college student mentors, and graduate student role models. The program was aimed at continuing support for students such as those who are the first in their family to attend college.*

Summary

We observed effective transfer practices in four areas:

1. **Relations with four-year schools** were characterized by a climate of cooperation and the development of complete and detailed articulation agreements.
2. **Student services that support transfer** were often centrally

coordinated, and frequently included specialized academic support and advising programs for potential transfer students.

3. **Technical support for the transfer function** included sophisticated student information systems, articulation databases, and research on transfer issues.

4. **Relations with elementary/secondary education** often involved cooperation and outreach activities at high schools and junior high schools, and coordination of curricula and academic programs between the community college and its feeder high schools.

We also found that transfer practices that are effective for traditional transfer students may not provide adequate help for large numbers of students with a low propensity to transfer. Strategies that appeared to be effective for non-traditional transfer students included:

1. **Student outreach** that emphasized personal contact;

2. **Student services** that included specialized programs targeted to serve specific populations such as older re-entering women, single parents, or academically underprepared students; and

3. **Academic support** for students with special needs.

Most NETC colleges have only begun to develop the specialized services needed to fully support non-traditional transfer students. The effective development of such services could substantially increase colleges' overall transfer rates.

Colleges with high transfer effectiveness had a multitude of activities that supported transfer, in a complex and interdependent system. The challenge for the 1990s may well be one of developing transfer strategies — within supportive organizational environments — that can strike a balance between meeting the needs of traditional and non-traditional transfer students.

6

Assessing and Managing the Transfer Function

This volume reports on the first year of research for the National Effective Transfer Consortium aimed at enhancing transfer effectiveness. As an initial effort, our goal was to lay the foundation both for subsequent research and for steps that community colleges could take to analyze and strengthen their transfer activities. Based on the findings presented here, this concluding chapter both summarizes the first year's results and sketches an approach we are now developing to enable colleges to enhance their transfer function.

The preceding chapters suggest that achieving and maintaining high transfer effectiveness is a complex process, requiring multiple strategies, constant adjustment as conditions and personnel change, and much coordination. Though the adoption of a new transfer activity can be important, its effect on the transfer function depends on how it is implemented in the larger organizational milieu that determines transfer success. Yet with the constant press of operations and uncontrollable events, community colleges can easily be unaware of the organizational and implementation issues they must attend to simultaneously. The most effective transfer colleges managed these issues by developing an *organizational capability* to assess their own strengths and weaknesses, anticipate changing conditions, select appropriate transfer strategies, and implement them in a flexible manner that allowed for their continuous adaptation to internal and external forces.

Few effective transfer colleges explicitly identified all the various components of their capability to assess and manage the transfer function. Their actual practices, however, revealed an underlying systematic approach. Figure 20 presents our conceptualization of the various steps these colleges implicitly used.

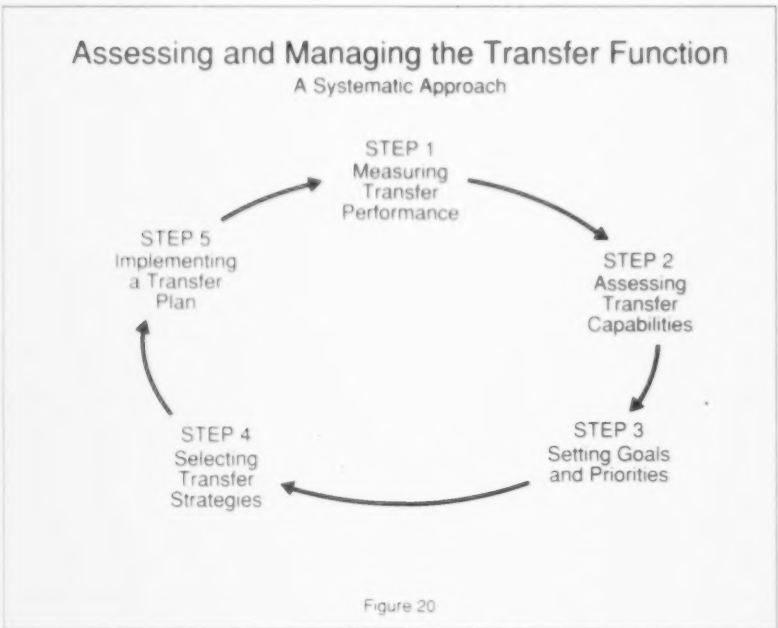

Figure 20

Step 1. Measuring Transfer Performance

Step 1 is measuring the college's "performance" in relation to the transfer function. Some colleges maintained sophisticated research staff who used a variety of measurements of the number or rate of transfers for the student body as a whole or for various sub-populations such as under-represented minorities. Several CEO's deemed the measurement and setting of specific goals related to transfer to be central to their program. This study has defined a series of measurements which, taken together, can provide colleges with the tools to make a balanced quantitative assessment of key aspects of the transfer function.

Chapter 1 defined a new measurement of transfer rate, *T over L*,

based on using exiting cohorts of credit enrollees. This calculation enables colleges to analyze their transfer rates over time and compare them to those of other colleges. In our reports to individual NETC colleges, we also computed transfer rates for male and female students as well as students from different ethnic backgrounds. This information can be used to locate significant differential rates across these sub-populations. For example, one college found that its transfer rates were higher for some ethnic groups than others and that students from one ethnic group in particular had a significantly lower transfer rate. This information is now being used to target its transfer activities. Similarly, one effective transfer college was surprised to learn that women had a significantly lower transfer rate than men, despite the fact that both males and females had high transfer rates compared to other NETC colleges. There can be many reasons for this difference, including the fact that this college had a large nursing program which awarded nursing certificates and tended not to transfer women to four-year universities. Therefore, a lower transfer rate for women seems understandable. However, a lower transfer rate for women existed even after nursing students were removed from consideration. Consequently, the college is now closely examining its re-entry program and other means for enhancing transfers for women.

Chapter 2 proposed a calculation of an *Expected Transfer Rate*. This measurement enables colleges to place their transfer performance into the context of the external conditions they face. Some NETC colleges, for example, have high percentages of part-time students and under-represented minorities; one might expect these colleges to have low transfer rates compared to colleges with more full-time students and fewer minorities. By calculating *Expected Transfer Rates*, we found that some of the colleges with a large proportion of part-time students and under-represented minorities had transfer rates above expectation even though their rates were all lower than the NETC average; our fieldwork confirmed that these colleges maintained effective transfer programs. Thus, the *Expected Transfer Rate* can help community colleges develop a balanced perspective on their transfer program, while providing them with a tool to set realistic and achievable goals for improving their transfer performance. Rather than establish a goal that may be unrealistic, it may be reasonable for a college to aim for a transfer rate within or somewhat above its expected range.

Chapter 3 provided a third measure, *Transfer Effectiveness*, which

is a tool for assessing how much a college's transfer activities are helping both students who might be expected to transfer and those who might not be expected to transfer. This measure can therefore be used to set specific goals and obtain a sensitive indicator of the extent to which these goals are being met. In particular, *Transfer Effectiveness* depends on how well a college is helping four types of students — *Type I*, students who could be expected to transfer and did so; *Type II*, students who could be expected to transfer, did not re-enroll, and had not transferred; *Type III*, students who might not have been expected to transfer but did so; and *Type IV*, students who might not be expected to transfer and had not transferred. The study found that helping *Type II* students to transfer requires different strategies than those that are most suited to helping potential *Type III* students. Therefore, knowing the proportion of each type in the student body can help colleges set priorities and target transfer programs accordingly. For example, more than one NETC college discovered that it had very effective transfer activities relative to *Type II* students, but had such a low percentage of *Type III* students that it needed to focus more intensively on the problems of non-traditional students. In contrast, these measurements of the different types of students showed one NETC college that it was doing rather well with non-traditional students but needed to re-examine its transfer practices for students who might be expected to transfer but were not doing so in a high enough proportion.

Step 2. Assessing Transfer Capabilities

The measurement tools described above pinpoint areas for improving transfer performance. However, actual improvement depends on the organizational support system for transfer, on the selection of effective strategies and practices, and on how well specific transfer strategies are implemented. It is therefore essential for community colleges to assess their transfer capabilities. At the most effective transfer colleges, such assessment is an on-going process, which we call a **diagnostic approach** to determining organizational strengths and the efficacy of current practices.

Specifically, Figure 21 presents a series of ten questions that community colleges might use to diagnose their own transfer system. The questions can be thought of as a combination of quantitative and

A Diagnostic Guide To Assessing Transfer Capabilities

Organizational Environment Supporting Transfer

1. Has transfer been established as a high priority for administrators, faculty, and staff throughout your college?
2. Are all services affecting transfer closely coordinated?
3. Do administrators and faculty work together to resolve problems related to transfer?
4. Does the college's long-run planning take into account the changing nature of transfer students?

Implementation of Transfer Strategies

5. Do you have complete, regularly updated articulation agreements and cooperative working relationships with four-year institutions to which your students generally transfer?
6. Does your campus have a well-functioning transfer center — i.e., a centrally-located administrative unit with responsibility for coordinating transfer-related activities?
7. Do you have the technological capacity to collect, process, and display student data needed for transfer advising; display and update articulation databases; and identify and conduct research on different types of potential transfer students?
8. Have you developed cooperative relations with feeder high schools, including outreach activities to increase recruitment as well as academic coordination of curricula and programs?

Effective Practices for Potential *Type III* Students

9. Have you developed special outreach activities to identify, contact, motivate, and assist non-traditional (Potential *Type III*) students?
10. When reaching out to non-traditional students, do you emphasize personal contact between students and faculty, counselors, advisors, peers, mentors, and other sources of support?

Figure 21

qualitative assessments. On an experimental basis, for example, we recently provided feedback to an NETC college president on our assessment of where the college stood on each question. Based on our fieldwork visit to the college, we rated the college from one to five as a way of providing a quantitative assessment for each question. In addition, regardless of whether the college was diagnosed as being very effective on a particular question (and therefore "received" a score of five) or was diagnosed as needing considerable attention in that area (and therefore "received" a score of one), we explained the assessment in qualitative terms, identifying strengths and weaknesses in the areas covered by each question. This diagnostic procedure thus suggested critical areas for more intensive investigation. In this case, the college president was informed that articulation was not being well managed and that the college did not have any centrally-located administrative unit with responsibility for coordinating transfer-related activities.

The first four diagnostic questions in Figure 21 reflect the four critical areas of organizational support identified in Chapter 4 — namely, focus on transfer, cooperative administrative climate, long-run planning and participatory decisionmaking, and collegial professional climate. The most effective transfer colleges will find it relatively easy to conduct a searching assessment of these issues and produce ideas for improvement, because the assessment is likely to be conducted in a cooperative and collegial environment — the mark of effective institutions. At less effective colleges the process may be more difficult precisely because there are less well-developed habits of planning, participatory decisionmaking and collegial relations. Nevertheless, a diagnostic review can provide a vehicle for colleges to change ineffective organizational patterns through the process of self-examination. Colleges that are determined to improve the quality of their organizational and administrative environment can begin to do so once they have a better understanding of their own processes and insight into what a more effective environment might look like at their own institution. Indeed, the organization and implementation of such a diagnostic assessment — requiring broad participation, a cooperative spirit, and collegial respect in order to succeed — can itself be the first step toward needed improvements.

Questions five through eight in Figure 21 represent the major areas of specific effective transfer strategies and practices described in Chapter 5 — namely, relations with four-year schools, student ser-

vices for potential transfers, technical support for the transfer function, and relations with elementary/secondary education. The last two questions concern the important area of transfer practices to meet the needs of non-traditional (potential *Type III*) students.

The next phase of the NETC research program will further develop this diagnostic approach.

Step 3. Setting Goals and Priorities

The first two diagnostic steps — measuring transfer performance and assessing transfer capabilities — lay the groundwork for setting goals and priorities. To do so, the transfer function should be put into the context of the college's other missions, and a balance must be struck among competing needs. The art of balancing can be aided by the systematic analysis of changing external factors (see Figure 14, Chapter 2). One of the most important factors for NETC colleges has been changing student demographics. For example, Chapter 4 related the case of a college which discovered through analysis of demographic data that the average age of its students was increasing and that increased enrollments were projected for students with learning disabilities and students with English as a second language. Thus, this college discovered that its proportion of non-traditional (potential *Type III*) students was expected to increase. In order to meet the special needs of these students and maintain its transfer effectiveness, the college took two actions: It revised its student assessment procedures (including expansion of assessment services to part-time and evening students), and it introduced new programs of academic advising, ESL instruction, and developmental education.

Another critical area that affects almost all NETC colleges has been financial constraints. Thus, the allocation of scarce resources was a principal concern at even the most effective colleges. Yet, these colleges worked within these constraints to the extent that resources could be brought to bear on high priority concerns, such as transfer. At these effective colleges, participatory decisionmaking and a collegial professional climate helped to insure a broad consensus in support of decisions on goals and priorities and associated resource allocations. Moreover, the decisions that were made took competing goals and interests into account without losing sight of the need to focus the institution's energies and resources in critical areas — e.g., to

maintain a focus on transfer in order to insure a supportive organizational environment for that mission.

Step 4. Selecting Transfer Strategies

Knowledge of effective transfer practices may help a college to better understand where it should search to improve its own transfer program —but it would be a mistake for college personnel to emulate detailed procedures found at other campuses without first asking whether such procedures are appropriate given their own college's student demography, resources, and other conditions. The literature on dissemination of innovations in education as well as in many other fields clearly shows that what is successful in one site may not work elsewhere. Because conditions vary from site to site, educators must learn to adapt critical components of practices that are effective at other institutions to the special circumstances of their own colleges. For example, one NETC college transfers students to many four-year institutions throughout its state, and therefore uses an on-line computer database that continuously updates articulation agreements with all those four-year campuses. That college may give itself a high score on the answer to Question 5 — "Do you have complete, regularly updated articulation agreements . . . with four-year institutions to which your students generally transfer?" Another NETC college, on the other hand, sends 95 percent of its transfer students to one nearby four-year institution. It considers a computerized articulation database unnecessary, but has developed an extensive process of regular meetings between its faculty and their counterparts in departments at the nearby four-year university, in order to agree on course articulation details and maintain up-to-date agreements. This college may also score high on Question 5 — with a very different strategy developed to suit its local transfer circumstances.

Step 5. Implementing a Transfer Plan

The most effective transfer colleges understood the twin components of effective implementation — (1) the formulation of a quality plan for implementing new or revised transfer practices, and (2) the importance of participatory decision making in both the development

and execution of the plan.

Effective transfer colleges proceeded systematically. They tended to specify the tasks that would have to be completed in order to make each practice work well, and they created a schedule, with clear benchmarks, for the implementation of each task. They set aside resources (budget, facilities where needed), assigned personnel with the necessary technical or managerial skills, and established how those responsible for implementing each practice were to be integrated within the college's administrative structure. In most cases, colleges expanded or refined existing practices — for example, some decided to strengthen articulation agreements. These elements of a transfer plan tended to be assigned to personnel who already had clear responsibilities in these areas, and whose authority within the college's administrative structure was well-understood. In some cases, however, the transfer plan called for a new position (e.g., a new articulation officer) or a new organization within the college (e.g., a Transfer Center). In these cases, the planning process required decisions on the qualifications and experience of the personnel to be assigned (or hired), or on the location of the new organization within the college's administrative structure.

A quality plan is necessary, but is clearly not sufficient to have an effectively implemented transfer program. There must be commitment, a sense of ownership, and mutual trust throughout the college. The effective transfer colleges tended to generate these attitudes by following a participatory decisionmaking process during both the formulation and execution of their transfer plan. At the most effective transfer colleges, the administration demonstrated commitment to the transfer plan by providing the authority and resources needed for new functions or organizations to succeed. New Transfer Centers, for example, received the funds needed to fully staff their operations, and their directors reported directly to campus Deans or Vice-Presidents rather than through lower-level officials. These colleges worked hard to insure that the goals of the transfer plan were widely shared, and that the plan had the active support of faculty and administrators.

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The steps that community colleges should take to assess and manage the transfer function are shown in Figure 20 as a circular pattern.

Implementation — Step 5 — is not the end of the process, but one step in a continuous cycle of measurement and assessment, adjustment of goals and priorities, selection of transfer strategies and practices, and additional implementation. At effective transfer colleges, this cycle is a dynamic component of college planning and activities. Regular measurement, assessment and planning keep college administrators and faculty alert to changes in their environment or shortcomings in existing practices, and permit them continuously to adapt their practices to accommodate new circumstances, or improve practices that are not working as well as desired. The measurement — assessment — priority setting — strategy selection process itself can help to build the commitment and support needed for successful implementation of the transfer plan. And successful implementation brings the college closer to the realization of widely shared goals. In this way, community colleges can build on success, learn from mistakes, and continue to enhance their transfer effectiveness.

Appendix A

Study Methods

The first year of this project was devoted to defining transfer rate and transfer effectiveness, establishing baseline data, and, above all, asking the right questions about the complex business of increasing transfers.

1. The Student Survey

The most important component of the first year's methodology was a student survey. After consultation with NETC members, we decided to sample only students who had earned six or more credits at the time of their enrollment in Spring 1988. This decision was made in part to reduce the number of students needed in the sample, but also because we did not expect many transfers among students who began the semester with fewer than six credits and doubted whether those who did should be regarded as transfer students.

Estimates based on student survey data are subject to inaccuracies; the most difficult aspects to control are response rate and response bias. The overall response rate across all 28 NETC Colleges was 44 percent. Surveys were sent to more than 32,150 students, and 13,970 responses were received. This level of response was adequate for making many statistical inferences implied in the text. We had designed the survey so that a 30 percent response rate would allow confident estimates.

Response bias means that those who responded to the survey may have different characteristics than those who did not respond. This is

a difficult problem to assess. We hope to make such assessments in future surveys. For the present, we believe it wise to assume that the statistics presented in this volume are approximations that provide useful research findings, not exact numbers.

The students were surveyed according to a random stratified sampling plan, described below, that differentiated students according to ethnic background, full- or part-time status, and whether they had completed 24 or more credits or fewer than 24 credits as of the beginning of the Spring 1988 term. This procedure allowed us to over-sample some groups of students to increase the accuracy of our findings. The results discussed in this study all reflect a weighting of respondents' answers to reflect their over- (or under-) sampling.

a. Overview of Survey Sampling Procedures

The goal of the sampling strategy was to be able to make statistically defensible conclusions about the transfer behavior of major groups of students at each college. Therefore, a stratified sample design was employed to ensure that students in each of these major groups were sampled in sufficient numbers at each college to allow us to make such conclusions. Limits on the sample size constrained the number of groups that could be used as stratification variables at each college.

b. Study Population

Students enrolled at NETC colleges during Spring 1988 at the time of the college's first or second census, depending on which data were available, comprised the population for the study. Colleges were asked to exclude from the population students:

- who had completed fewer than six units at the time of the census (because such students were unlikely to be eligible to transfer);
- whose ethnicity was unknown for any reason, including those students who declined to state their ethnicity and those with this information missing from their records (because ethnicity was an important characteristic for analyzing transfer behavior and was used as a stratification variable);
- whose designated ethnicity was "Non-resident Alien" for those

colleges that use this designation (because the actual ethnicity of these students was unknown);

- whose Social Security Numbers were missing from their records; and
- whose student identification numbers had been assigned because their Social Security Numbers were missing (because Social Security Numbers were needed for student tracking purposes).

Students with Bachelor's degrees were to have been excluded also (since transfer is irrelevant to students who have already completed a four-year degree), but many of the colleges were unable to identify such students, so they were kept in the population for the sake of consistency.

c. Sample Size

The total sample size was limited by cost constraints to approximately 30,000 students; the average college sample was 1,148 students.

d. Response Rate Assumptions

Although there was reason to believe that the actual survey response rate would be higher, the sample was designed so as to require cell response rates of 30 percent in order to support valid statistical inferences.

Stratification Variables

Three variables — units completed, full- or part-time attendance status, and ethnicity — were used for stratifying the sample at each college.

Units Completed.[21] Students who were eligible to transfer or had transferred as of the time of the survey (Fall 1988) were an important group to be included in the study. Such students would necessarily have completed a large portion of the units required for transfer by Spring 1988. Students who have completed enough units to be eligible to transfer by the next semester are a minority at most colleges, so units

[21] One college was unable to differentiate its students by units completed; therefore, only attendance status and ethnicity were used as stratification variables in their sample.

completed was used as a stratification variable in order to ensure that these students were adequately represented in the sample. Based upon an analysis of college census data, the stratification variables were set at six to 23.99 units completed, and 24 or more units completed. Students with fewer than six units completed were excluded because such students are least likely to transfer.

Full- or Part-Time Attendance Status. Full-time students are most likely to be interested in transfer, but they are a minority at most NETC colleges. In order to ensure that full-time students were adequately represented in the sample, attendance status was also used as a stratification variable. The definition of full-time was left to the individual colleges, but generally corresponded to enrollment for 12 or more semester-units.

Ethnicity. Ethnicity was also used as a stratification variable in order to ensure that ethnic groups with significant numbers of students at a college were adequately represented in the sample. However, stratifying the sample by each ethnic group reported by each college would have made it more difficult to draw valid conclusions about some groups given the overall sample size constraint. Therefore, for each college, any ethnic group which contained 125 or more students with 24 or more units completed (regardless of the number of students in that group with fewer than 24 units) was included as a separate ethnic group for the purpose of stratifying the sample.[22] This criterion was set at students with 24 or more units because of the focus on students who would potentially be transfer-eligible the following fall. Ethnic groups with fewer than 125 students with 24 or more units were aggregated in an "Other" category, together with students designated as "Other" by the college.[23] As noted above, students with an unknown ethnicity, or a designated ethnicity of "Non-resident Alien," were excluded from the study population.

[22] An exception: Students designated as American Indian at one college were included in the category "Other" despite having more than 125 students (131). Including American Indians as a separate category would have meant stratifying this college's sample by seven ethnic groups, resulting in such small numbers of students in each sample cell that it would have been difficult to draw conclusions about the transfer behavior of specific types of students at the college.

[23] Two exceptions: Students designated as Native American at one college were left out of the sample for that college because they were very few in number (25) and would have been the only students comprising an "Other" category. Black students at one college were included as a separate ethnic group for stratifying the sample at that college even though they numbered less than 125. This was done because there were nearly 125 (117) and because there were only four other ethnic groups being used for stratification, so including Black as a separate category did not reduce the number of students in each sample cell below levels necessary for adequate numbers of responses.

Gender. The colleges were asked to provide data on the number of male and female students, broken down by units completed, attendance status, and ethnicity. Gender was not used as a stratification variable because 1) the male/female ratio was relatively even and constant within these groups and across colleges, 2) there was no reason to expect a different response rate from one gender, and 3) introducing a fourth stratification variable into the sample would have reduced the sample cell sizes at some colleges to below the point at which valid conclusions could be made about the students in those cells at response rates of 30 percent. However, survey analysis revealed major differences in response rates for males and females at some colleges. In hindsight, stratification by gender would have allowed us to statistically correct for these response differences.

e. Estimation of Cell Population Counts

Colleges provided data on the number of students with 24 or more units, broken down by attendance status and ethnicity. These numbers were used as estimates of the populations of each cell from which the sample could be drawn.[2]

For students with fewer than 24 units, the cell population counts were estimated with the following formulas:[3]

- # of full-time students of ethnicity A with fewer than 24 units = [(total # of full-time students) x (proportion of full-time students that are of ethnicity A)] - (# of full-time students with 24 or more units of ethnicity A)
- # of part-time students of ethnicity A with fewer than 24 units = [(total # of part-time students) x (proportion of part-time

[2] Because the colleges were requested to exclude students with bachelor's degrees from the population data, but such students were not excluded from the sample (see Study Population above), these estimates may have been lower in some cases than the actual number of students in a particular cell. Another source of error in estimating the cell population counts is the practice of some colleges of assigning students with unknown ethnicity to specific ethnicities in proportion to the ethnicities of the rest of the students. Because such students were included in the population data but excluded from the sample, the population cell counts may have been overestimated in these cases.

[3] Cell population counts for students with fewer than 24 units were estimated in this fashion because data on these students were not requested from the colleges. This method assumes that the proportions of full-time and part-time students and the proportions of each ethnicity are the same for students with fewer than 24 units as for those with more than 24 units. Since these assumptions may not be true, the estimated cell population counts may differ from the actual counts.

students that are of ethnicity A)] - (# of part-time students with 24 or more units of ethnicity A)

f. Determination of Cell Sample Sizes

Determining the cell sample sizes involved two steps. First, general targets were established for each cell, then the targets were compared to the cell population counts to determine the actual cell sample sizes.

In general, the minimum sample size target for each cell was 40, the number of students required to make valid conclusions about that group assuming a 30 percent response rate. Cell size targets were generally increased for full-time students with more than 24 units (the students most likely to be interested in transfer) and for the largest ethnic group at the college. The targets also varied according to the number of ethnic groups used for stratification at the college, which ranged from two to seven. Colleges with more ethnic groups required that the targets for each cell be smaller in order to stay within the constraint of the overall sample size. The targets were as follows:[26]

Two Ethnic Groups[27]
(TOTAL SAMPLE = 960)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	170	170	170	170
Other	70	70	70	70

[26] In these examples, Ethnicity A represents the largest ethnic group at the college and Other includes all ethnic groups that were too few in number to be used for stratification. Sample targets were somewhat different for the few colleges with no Other designation.

[27] Four colleges.

Three Ethnic Groups[28]

(TOTAL SAMPLE = 950)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	150	120	120	120
B	90	50	50	50
Other	50	50	50	50

Four Ethnic Groups[29]

(TOTAL SAMPLE = 1,070)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	122	100	100	100
B	74	50	50	50
C	74	50	50	50
Other*	50	50	50	50

Five Ethnic Groups[30]

(TOTAL SAMPLE = 1,170)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	111	95	95	95
B	63	45	45	45
C	63	45	45	45
D	63	45	45	45
Other	45	45	45	45

[28] Five colleges.
[29] Five colleges.
[30] Eight colleges.

Six Ethnic Groups[51]

(TOTAL SAMPLE = 1,210)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	74	60	60	60
B	59	45	45	45
C	59	45	45	45
D	59	45	45	45
E	59	45	45	45
Other	45	45	45	45

Seven Ethnic Groups[52]

(TOTAL SAMPLE = 1,190)

	24 OR MORE UNITS		6 TO 23.99 UNITS	
ETHNICITY	FULL-TIME	PART-TIME	FULL-TIME	PART-TIME
A	50	40	40	40
B	50	40	40	40
C	50	40	40	40
D	50	40	40	40
E	50	40	40	40
F	50	40	40	40
Other	50	40	40	40

The second step in designing the samples involved comparing the targets to the estimated cell population counts. If there were fewer students estimated to be in a particular cell than the target called for, the entire estimated population of the cell was included in the sample and the "extra" sample spaces (the difference between the target and the estimated cell population) were distributed to other cells in the following order:

- *First*, to the other attendance status within the same category of units completed and of the same ethnicity; e.g., if there were not enough full-time Black students with 6–23.99 units

to meet the target for that cell, the sample size for the cell for part-time Black students with 6–23.99 units was increased first;

- *Second*, to the other category of units completed for the same ethnicity; e.g., if there were not enough Black students with 6–23.99 units to meet the targets for those cells, the sample size for the cells for Black students with 24 or more units were increased next (if extra sample spaces were added to students with 24 or more units, they were added to the full-time cell; if they were being added to students with 6–23.99 units, they were distributed across both full-time and part-time); and
- *Third*, to the largest ethnic group, evenly across all four cells.

After the samples for each college were constructed using these rules, several colleges reported that the sample sizes for particular cells were larger than their actual cell population count (due to the sources of error discussed in Notes 13 and 14). In these cases, the colleges were instructed to include the entire cell population in the sample and the "extra" sample spaces were redistributed according to the rules above.

g. Reliability of Estimates

The sampling plan was designed for a "worst case scenario" of a 30 percent response rate. Since a stratified sample design was incorporated, a weighted analysis was planned. Also, since "transfer" is a binary response variable, the variance of our estimated transfer rate (by cell) was bounded by $\frac{1}{4n}$ where n is the number of responses in the cell. (This assumes minimum respondent — non-respondent bias.) This bound is moderately tight for .2 ≤ transfer rate ≤ 8; at the extremes it becomes too wide. Thus, to the first order of approximation, the variance of a college's estimated transfer rate is bounded as:

$$\text{Var}\,\hat{p} = \text{Var}\left[\frac{1}{N^2}\sum_{i=1}^{\#\text{ of cells}}\left(\frac{N_i}{n_i}\right)^2 \text{Var}\,\hat{p}_i\right]$$

$$= \sum_{i=1}^{\#\text{ of cells}} \frac{w_i^2}{n_i^2}\,\frac{(p_i(1-p_i))}{n_i} \leq \frac{1}{4}\sum_{i=1}^{\#\text{ of cells}} \frac{w_i^2}{n_i^3}$$

where N = total population, w_i = proportion of population in cell *i*, and n_i = number of respondents in cell *i*.

Assuming negligible respondent — non-respondent bias, the reliability (i.e., the standard deviation [SD]) of an estimate depends very much on the actual number of respondents and on the cells in which they occur. Consider the following examples which cover two types of patterns encountered in the data for most NETC colleges:

Example 1

	N_i	w_i	Sampled	#Responses
Cell 1	9,900	.99	60	50
2	50	.01	50	3
3	50	.01	50	5
	10,000		160	58

The estimated transfer rate here will be reasonably reliable. In particular,

$$\text{Var}\,\hat{p} = \text{Var}\left[\frac{1}{N}\sum\left(\frac{N_i}{n_i}\right)\text{Var}\,\hat{p}_i\right]$$

$$= \sum\frac{w_i}{n_i}\frac{(p_i(1-p_i))}{n_i} \approx \frac{1}{n}\sum\frac{w_i}{n_i}$$

Example 2

	N_i	w_i	Sampled	#Responses
Cell 1	5,000	.33	60	50
2	5,000	.33	50	3
3	5,000	.33	50	5
	15,000		160	58

$$\text{Var}\,\hat{p} \leq \frac{1}{4}(.33)^2\left[\left(\frac{1}{50}\right)^2 + \left(\frac{1}{3}\right)^2 + \left(\frac{1}{5}\right)^2\right]$$

$$= 1.226 \times 10^{-3}$$

$$\text{SD} \leq .035$$

These examples illustrate the point that for a response rate of about 30 percent, we would expect reasonably reliable estimates consistent with the purposes of this study.

2. FIELDWORK

The fieldwork objective was to support the quantitative analysis in helping to ascertain what community colleges should do in order to increase the numbers of students who transfer to four-year schools — particularly students who are underrepresented among all transfers.

In order to meet this objective, we needed to know which practices were effective (and particularly ineffective) at NETC colleges. We also needed to know what organizational conditions were needed in order to improve transfer rates. Thus, our goals in the fieldwork were to:

- fill in gaps in our information on college background conditions;
- identify organizational conditions conducive to improving transfer; and
- identify effective college transfer practices.

a. Exploratory Fieldwork

The fieldwork process began in the summer of 1988, when BW research staff conducted one day exploratory fieldwork visits at seven NETC colleges. The exploratory fieldwork had three main purposes:

1. **To help us decide where to concentrate our investigations.** With finite resources, we had to choose what areas to focus on. The exploratory fieldwork, (together with a literature review, and our own knowledge and experience) was relied on to help us make these choices.

The interim goal was the development of a fieldwork guide for our work over the 1988-89 academic year.

2. **Interviewer training.** While the research staff had considerable community college fieldwork experience, we felt we could benefit greatly from additional exposure to the daily functioning of community colleges, and an opportunity to sharpen our interviewing skills in light of the special demands of this project.

3. **To provide information for fieldwork logistics planning.** A variety of strategies were available for deploying our fieldwork resources. Before final decisions were made, we wanted to review our experience with the exploratory fieldwork, to assess how many person-days per site would be needed to collect the information we wanted, how many visits should be made, etc.

Interviews conducted as part of the exploratory fieldwork dealt broadly with six topics that we knew we would eventually want to investigate in more detail:

- College priorities
- Organizational environments
- Academic and student support services
- Technical capabilities
- Transfer strategies
- Constraints impeding transfer

The exploratory fieldwork was used to help us understand the scope and dimensions of each of these areas, and their relative importance; what other areas should be investigated; and how completely we could hope to understand these issues given the resources we could devote to fieldwork.

The visits were also used to collect local statistics and studies, and for brief discussions with college data processing personnel of what student data they could provide to support the quantitative analyses.

b. Full Fieldwork

Following exploratory fieldwork and the development of a Fieldwork

Guide to help structure the data collection, full fieldwork began in fall 1988, and site visits were conducted through spring 1989. Each of the 28 NETC colleges was visited by a member of the BW research staff; the average fieldwork visit lasted two days.

Information was obtained in three ways: personal interviews at each campus, document collection and review, and, where necessary, follow-up telephone calls. The principal activity consisted of personal interviews. At each campus, arrangements were made to interview as many of the following as possible:

College president
Study liaison
Vice President, Academic Affairs (Instruction)
Dean of Instruction
Dean (Associate Dean), Liberal Arts (General Education)
Dean (Associate Dean), Science
Dean (Associate Dean), Occupational Education
Vice President, Student Services
Dean (Associate Dean), Counseling
Director, Financial Aid
Dean (Director), Minority Student Affairs
Director of Research, MIS, or Computer Services
President of the Faculty Senate
Head of the Faculty Bargaining Unit
Key Department Heads
Students
Associate Deans with broad portfolios
(e.g., working directly under a VP for Student Services)
Registrars, Directors of Enrollment or Admissions and Records
Directors of Learning Centers/Tutoring Labs
Counselors
Faculty

The following topics were covered during fieldwork interviews:

Background Conditions

Governance and finance

Budgets
Enrollment Trends
Mission emphases
Community characteristics
Policies and proximity of main four-year transfer institutions

Organizational Conditions

College priorities
Administrative climate
Planning and decisionmaking
Professional climate
Student services
Academic support

Transfer Practices

Academic program
Relationships with four-year institutions
Relationships to communities and secondary schools
Student support services
Student outreach
Technical support

Special efforts were made during the fieldwork to interview three types of students:

- Students whose transfer goals were clear when they entered the college; typically students who entered directly from high school;
- Students who had initial problems or uncertainties, but were subsequently clear that they wanted to transfer — who had some help or intervention, either at the college or from some other source, that put them on the transfer track; and
- Students who were undecided or uncertain — i.e., students without clear goals who might do well at four-year schools if they could be motivated or helped to move in that direction.

Students were asked about their academic and career interests and their experiences at the college; interviewers also attempted to learn something about the students' confidence in their academic abilities

and their motivation to continue their educations.

The colleges were not always successful in locating for interviews the second and third types of students — those who had been or were still uncertain of their goals. A number of students in all three categories were eventually interviewed, however, and provided valuable insights to the research team.

Appendix B

Student Survey Questionnaire

80/81

COMMUNITY COLLEGE STUDENT SURVEY

1. In Spring 1988, you were enrolled at our community college. Were you also taking courses then at: (Check **one**)

☐ 1. Another community college? ☐ 2. A four year college? ☐ 3. Neither?

2. In Spring 1988, were you employed? ☐ 1. Yes ☐ 2. No → **SKIP TO QUESTION 3**

2.1 **If yes**, how many hours per week (on average) did you work? (Check **one**)

☐ 1. 15 or fewer ☐ 3. 21-30 ☐ 5. 40 or more
☐ 2. 16-20 ☐ 4. 31-39

3. Have you earned a high school diploma or its equivalent? ☐ 1. Diploma ☐ 2. Equivalent ☐ 3. Neither

3.1 **If diploma or equivalent**, in what year? 19__

4. Before enrolling at our community college, did you ever take credit courses at another community college? ☐ 1. Yes ☐ 2. No

5. Before enrolling at our community college, did you ever take credit courses at a 4 year college or university (not including extension)? ☐ 1. Yes ☐ 2. No

6. In Spring 1988, were you on leave from a four year college? ☐ 1. Yes ☐ 2. No

6.1 **If yes**, which of the following reasons best describes why you were enrolled at our college while you were on leave? (Check **one**)

☐ 1. Courses I wanted were more available
☐ 2. Courses I wanted were taught better
☐ 3. I needed to make up work in courses where I had problems
☐ 4. Class sizes were smaller
☐ 5. Personal/family reasons
☐ 6. None of the above

7. The following is a list of reasons some people have for attending college. How important is (or was) each of the following reasons to **your** attendance at our college? (Circle **one** number on each line.)

	Important		Somewhat Important		Not Important
a. To prepare myself to enter a 4 year college	1	2	3	4	5
b. To enable me to get a job or a better job	1	2	3	4	5
c. To improve or maintain skills for my current job	1	2	3	4	5
d. To learn more about subjects that interest me	1	2	3	4	5
e. My parents wanted me to go	1	2	3	4	5

8. Have you earned a Bachelor's or higher degree? ☐ 1. Yes ☐ 2. No

IF YOU HAVE A BACHELOR'S DEGREE OR HIGHER, PLEASE SKIP TO QUESTION 33

9. Which best describes how much schooling your parents completed? (Check **one** for each parent)

	Mother	Father
a. Bachelor's degree or higher	☐ 1	☐ 1
b. Community college degree or certificate	☐ 2	☐ 2
c. Some college	☐ 3	☐ 3
d. High school graduate or the equivalent	☐ 4	☐ 4
e. Not a high school graduate	☐ 5	☐ 5
f. Don't know	☐ 6	☐ 6

10. Do you have a brother or sister who enrolled in college before you did? ☐ 1. Yes ☐ 2. No

11. Is English the language most often spoken in your home? ☐ 1. Yes ☐ 2. No

12. During the 1988 Spring term, did you receive services from any of the following student service programs at our college? (Check **all that apply**)

☐ a. Disabled/Handicapped ☐ c. Job Placement ☐ e. Tutorial
☐ b. Economically Disadvantaged ☐ d. Financial Aid ☐ f. Other
☐ g. No Services

13. How important was each of the following in helping you make your academic and career plans? (Circle **one** number on each line)

	Important		Somewhat Important		Not Important
a. Counseling staff at our college	1	2	3	4	5
b. Faculty at our college	1	2	3	4	5
c. Administrators at our college	1	2	3	4	5
d. Other students at our college	1	2	3	4	5
e. Student organizations at our college	1	2	3	4	5
f. Four-year college representatives	1	2	3	4	5
g. Four-year college students	1	2	3	4	5
h. Your family	1	2	3	4	5

14. Are you partially or entirely supported by your parent(s)? ☐ 1. Yes ☐ 2. No

15. Do you have dependents living with you? ☐ 1. Yes ☐ 2. No

16. Which of the following best describes your pattern of attendance at community college? (Check **one**)

☐ 1. Continuously enrolled
☐ 2. Enrolled, left for one or more terms, and re-enrolled

17. Which of the following best describes your enrollment history at community college? (Check **one**)

☐ 1. Usually full-time ☐ 2. Usually part-time ☐ 3. Sometimes full, sometimes part-time

18. To what extent have you participated in school or student activities at our college (e.g., athletics, clubs, music or drama groups, publications, student government, etc.)? (Circle **one** number)

No Participation 1 2 Some Participation 3 4 A Lot of Participation 5

19. Are now taking courses at our college? ☐ 1. Yes ☐ 2. No → SKIP TO QUESTION 23

20. Do you plan to attend another community college? ☐ 1. Yes ☐ 2. No

21. Please indicate which of the following statements is most appropriate for you. (Check A, B, or C)

☐ A. I have applied or plan to apply to a four-year college after completing community college

IF YOU CHECKED A, PLEASE SKIP TO QUESTION 27

☐ B. I am not sure whether I will apply to a four-year college after completing community college
☐ C. I definitely do not plan to apply to a four-year college after completing community college

22. How important is each of the following reasons why transfer to a four-year school is not in your definite plans? (circle **one** number on each line)

	Important		Somewhat Important		Not Important
1. My career goals do not require a 4-year degree	1	2	3	4	5
2. I don't have the money to attend a 4-year college	1	2	3	4	5
3. Family obligations prevent my attending a 4-year college	1	2	3	4	5
4. I would not feel comfortable at a 4-year college	1	2	3	4	5
5. I've never thought about attending a 4-year college	1	2	3	4	5
6. I haven't decided on career goals yet	1	2	3	4	5

NOW THAT YOU HAVE ANSWERED THIS QUESTION (22), PLEASE SKIP TO QUESTION 33

23. Which of the following applies to you? (Check **one**)

- ☐ 1. Not attending school
- ☐ 2. Enrolled full-time at another community college
- ☐ 3. Enrolled part-time at another community college
- ☐ 4. Enrolled full-time at a four-year college or university
- ☐ 5. Enrolled part-time at a four-year college or university
- ☐ 6. Enrolled at both a community college and a four-year college or university
- ☐ 7. Enrolled at a trade or proprietary school

IF YOU ARE ENROLLED AT A FOUR-YEAR INSTITUTION, PLEASE SKIP TO QUESTION 33

24. Please indicate which of the following statements is most appropriate for you. (Check A, B, or C)

- ☐ A. I have applied or plan to apply to a four-year college or university

IF YOU CHECKED A, PLEASE SKIP TO QUESTION 27

- ☐ B. I am not sure whether I will apply to a four-year college or university
- ☐ C. I definitely do not plan to apply to a four-year college or university

25. How important is each of the following reasons why transfer to a four-year school is not in your definite plans? (circle **one** number on each line)

	Important		Somewhat Important		Not Important
1. My career goals do not require a 4-year degree	1	2	3	4	5
2. I don't have the money to attend a 4-year college	1	2	3	4	5
3. Family obligations prevent my attending a 4-year college	1	2	3	4	5
4. I would not feel comfortable at a 4-year college	1	2	3	4	5
5. I've never thought about attending a 4-year college	1	2	3	4	5
6. I haven't decided on career goals yet	1	2	3	4	5

26. Which of the following statements best describes your current situation? (Check **one**)

- ☐ 1. I Have stopped attending school but plan to re-enroll at our community college
- ☐ 2. I Have stopped attending school but plan to enroll at another community college
- ☐ 3. I Have no plans to continue my education, and have not met my goals
- ☐ 4. I Have no plans to continue my education, and have met my goals

NOW THAT YOU HAVE ANSWERED THIS QUESTION (26), PLEASE SKIP TO QUESTION 33

27. **(If you checked 21A or 24A, above)** When do you plan to enter a four-year college? 19____ in the

- ☐ 1. Fall term
- ☐ 2. Winter term
- ☐ 3. Spring term
- ☐ 4. Summer term

Please turn to last page →

28. Have you made application to one or more four year colleges? ☐ 1. Yes
☐ 2. No → SKIP TO QUESTION 33

29. Have you been either fully or provisionally accepted at any of the colleges to which you have applied?
☐ 1. Yes → SKIP TO QUESTION 32
☐ 2. No

30. If you have not been accepted, what is the status of your application? (Check A, B, or C)
☐ A. I have not heard yet from any college to which I have applied

IF YOU CHECKED A, PLEASE SKIP TO QUESTION 33

☐ B. All of my applications have been rejected
☐ C. I have not heard from some colleges, and others have rejected my application

31. If any of your applications were rejected, what reasons were given? (Check **all that apply**)
☐ a. Did not have the right courses in math or English
☐ b. GPA too low
☐ c. Did not have the right courses in general education
☐ d. Not enough total units of community college credit
☐ e. GPA too low for the major I wanted
☐ f. Did not have the right courses for the major I wanted
☐ g. Don't know
☐ h. Other (_____)

NOW THAT YOU HAVE ANSWERED THIS QUESTION (31), PLEASE SKIP TO QUESTION 33

32. Are you planning to attend one of the colleges where you have been accepted?
☐ 1. Yes → SKIP TO QUESTION 33
☐ 2. No

32.1. If No, why are you not planning to attend? (Check **all that apply**)
☐ a. I cannot afford to attend
☐ b. I could not find housing
☐ c. Personal/family reasons
☐ d. I changed my mind and no longer plan to transfer
☐ e. Other (_____)

33. Please examine the address label below and make any corrections needed.

[Label to be affixed in this space]

THANK YOU
Please Return the Questionnaire in the Enclosed Postage-Paid Envelope

Appendix C

The NETC Colleges

86/87

BAKERSFIELD COLLEGE

1801 Panorama Drive
Bakersfield, CA 93305

Founded: 1913
District: Kern County Community College District, James C. Young, Chancellor
Serving: Greater Bakersfield Area at one campus and two off-campus sites, with 10,500 students

Locally elected trustees:
Mr. Mark G. Raney, President
Mrs. Rose Marie Bans
Mr. Edward B. Cornell
Dr. Gilbert J. Plain
Mr. M. Glenn Bultman, Clerk
Mr. Cecil J. Bailey
Dr. Angus M. Marchbanks

President: Dr. Richard Wright

NETC Liaison: Dr. Sandra Serrano, Associate Dean of Students

Other administrator with important transfer responsibilities:
Jennifer Barefield, Director of Transfer Center

Mission: Bakersfield is an open-door institution dedicated to meeting the educational needs of the community with high standards and flexibility toward program development. The college seeks to provide the essential base for degree programs: to broaden knowledge, skills and attitudes; to develop analytical ability and critical thinking; and to foster interest in life-long learning in the educational, scientific and cultural fields essential for effective participation in a complex society.

Key facets of the transfer program: Bakersfield maintains a strong and diverse transfer program providing an important transition between local high schools and upper division work at four-year colleges and universities. The Transfer Center hosts multiple workshops on campus for students interested in transfer, and is involved with the ethnic centers on campus and the re-entry center to encourage transfer among underrepresented students. An advisory council has been established which brings together personnel from elementary, junior high, high school, CSU Bakersfield, and Bakersfield college to discuss transfer issues and articulation efforts.

Butler County Community College

College Drive, Oak Hills
Butler, PA 16001

Founded: 1965
Serving: Western Pennsylvania at four campuses and three off-campus sites, with 3,000 students

Locally elected trustees:

Mr. D. Michael Hartley, Chairman
Mr. John D. West, Secretary
Mr. James A. Beck
Mrs. Grace Hawkins
Mrs. Edith H. McCandless
Mr. Paul M. Montgomery
Mr. Ray C. Patterson
Mr. Ray D. Steffler
Mrs. Nancy Murrin, Vice Chair
Mr. I. Ted B. Cranmer, Treasurer
Mr. William D. Bessor
Mr. George W. Marburger
Mr. Michael E. Meaders
Mrs. Erma J. Mowry
Mrs. Doris L. Rose
Hon. Thomas King

President: Dr. William Price

NETC Liaison: Mr. Boyd Brewer, Transfer Counselor

Other administrators and faculty with important transfer responsibilities:
Dr. Patricia Bloom, Dean of Students
Dr. Michael Sanderson, Dean of Instruction

Mission: Butler County Community College is an institution dedicated to making quality, affordable, and comprehensive educational opportunities accessible to all. This comprehensive education includes transfer, occupational, and continuing education programs, general basic education, and remedial education. Furthermore, the college is committed to serving the community by contributing to its economic development and to cultural and intellectual enrichment.

Key facets of the transfer program: The college's transfer program emphasizes the establishment of a working relationship with students early in their enrollment at Butler; working cooperatively with academic departments in curriculum design; providing information to academic advisers appropriate to helping students make good decisions; and maintaining a close, positive working relationship with key faculty and administrators at the primary transfer colleges and universities.

CHABOT COLLEGE

25555 Hesperian Blvd.
Hayward, CA 94545

Founded: January 1, 1961
District: South County Community College District, Dr. Terry Dicianna, Chancellor
Serving: Castro Valley, Hayward, San Leandro, San Lorenzo and Union City at two campuses and three off-campus sites, with 19,300 students

Locally elected trustees:
Dr. Arnulfo Cedillo, President
Mr. Gary R. Craig, Member
Mrs. Isobel F. Dvorsky, Member
Mrs. Linda M. Tangren, Member
Mrs. Elva Cooper, Secretary
Mr. Fred M. Duman, Member
Mr. Barry Schrader, Member

President: Dr. Terry Dicianna

NETC Liaison: Dr. William Threlfall, Institutional Research Coordinator

Other administrators and faculty with important transfer responsibilities:
Dr. Leland Kent, Associate Dean of Instruction
Dr. Ruth Self, Dean of Student Personnel Services
Mr. Carey Harbin, Assistant Director of Counseling and Guidance

Mission: Chabot College provides high quality educational opportunities to the citizens of the South County Community College District — occupational and transfer programs, continuing education, and basic skills. In addition, the college offers counseling, guidance and other educational support services and activities, and sponsors programs to enrich the intellectual, cultural and economic life of the community.

Key facets of the transfer program: Chabot College has developed several specialized programs to enhance the college transfer program. The Daraja Program, for black students, and the Puente Project, for hispanic students, are geared toward those students who are in need of developmental skills. Other programs include PACE, a program which provides general education courses to working students; and Interdisciplinary Studies in Letters and Science (ISLS), a one and-a-half year program which enrolls approximately 150 students.

Compton Community College

1111 East Artesia Blvd.
Compton, CA 90221

Founded: 1927
Serving: Compton, Enterprise, Lynwood, Paramount, and Willowbrook at one campus and six off-campus sites, with 5,000 students

Locally elected trustees:
Mrs. Jane Astredo, President
Mr. James Carter, Vice President
Mr. Legrand H. Clegg, II
Mrs. Emily Hart-Holifield, Clerk
Dr. Charlie M. Knight

President: Dr. Warren A. Washington

NETC Liaison: Mr. Boice Bowman, Dean/Assistant Superintendent Student Affairs

Other administrator with important transfer responsibilities:
Dr. Horace Alexander, Transfer Center Director

Mission: Compton dedicates itself to both the general welfare of its service area and to the individuals who live and work therein. The college sees itself as an integral part of the community, a shared asset reflecting the needs and aspirations of the people, while providing leadership in educational and cultural affairs.

Key facets of the transfer program: The college employs both traditional and non-traditional means to promote the transfer program. For example, four hundred parents and children are hosted annually at a day of workshops which explain and promote the transfer concept, while a mobile van frequents public thoroughfares and schools, promoting the program.

CUYAHOGA COMMUNITY COLLEGE

700 Carnegie Avenue
Cleveland, OH 44115

Founded: 1963
Serving: Cuyahoga County at three campuses and 16 off-campus sites, with 40,000 students

Board of Regents:

Rubie McCullough, Chairman
Richard Acton
Julian Earls
Douglas P. Foxx
Ralph Tyler
Jay Seaton, Vice Chairman
Alice Butts
Nadine Feighan
Owen Heggs

President: Dr. Nolen Ellison

NETC Liaison: Dr. Janet D. Smith, Vice President, Planning and Research

Other administrators and faculty with important transfer responsibilities:

Dr. Anne K. Bourjaily, Director, Center for Articulation and Transfer Opportunities
Mr. Paul E. Shumaker, Vice President, Academic/Student Affairs
Dr. Richard C. Romoser, Assistant Vice President, Student Development
Dr. Curtis F. Jefferson, Educational Consultant to the President
Mr. Thomas Schick, Assistant Dean, Admissions and Records
Dr. Mitzi E. Perry-Miller, Campus Director, Admissions and Records
Dr. Sharon A. Akridge, Campus Director, Admissions and Records

Mission: Cuyahoga Community College seeks to provide high-quality, accessible, and affordable educational opportunities and services, including university transfer, as well as technical and lifelong learning programs that promote individual development and improve the overall quality of life in a multicultural community.

Key facets of the transfer program: Cuyahoga Community College has initiated transfer agreements with more than fifty different high schools, colleges and universities. Of particular note, the College has established innovative dual admission agreements with Cleveland State and Kent State Universities which define relationships between CCC and 30 different programs at Kent State University, and between CCC and 60 programs at Cleveland State University.

De Anza College

21250 Stevens Creek Blvd.
Cupertino, CA 95014

Founded: 1967
District: Foothill-De Anza Community College District, Thomas W. Fryer, Chancellor
Serving: Santa Clara County at one campus and one off-campus site, with 26,800 students

Locally elected trustees:

Dr. Robert C. Smithwick, President	Mr. Raymond F. Bacchetti,
Dr. Gerald Besson	Ms. Mary Wallace
Mr. Alfred Chasuk	Mr. Gene Murden

President: Dr. A. Robert DeHart

NETC Liaison: Ms. Rena Frabony, Director, Office of Relations with Schools

Other administrators and faculty with important transfer responsibilities:
Mr. Donald A. Perata, Vice President, Student Services
Dr. Judy C. Miner, Associate Dean, Matriculation
Ms. Marky H. Olsen, Associate Dean, Counseling Services

Mission: De Anza's mission is to offer educational programs which provide for individual development and enhance the quality of community life. Furthermore, the college seeks to develop human potential, transmit knowledge, supply educational talent, cultivate responsible citizenship, facilitate life-long learning, offer appropriate cultural and recreational activities, supply educational resources for community development, act as an instrument for educational justice, and promote social meritocracy.

Key facets of the transfer program: Organized unusually for community colleges, De Anza College has established the Office of Relations with Schools to coordinate transfer programs — including articulation, outreach, and transfer activities with local schools and colleges — and to work closely with counselors and the Transfer Center. The college has established regional transfer guarantees by contract, using computerized major articulation and transfer newsletters for publicity; and a transfer support program for underrepresented minorities, "A Starting Point," which offers staff, peer support, mentors and university contact.

DIABLO VALLEY COLLEGE

321 Golf Club Road
Pleasant Hill, CA 94523

Founded: 1949
District: Contra Costa Community College District, John I. Carhart, Chancellor
Serving: Central Contra Costa County at one campus and one off-campus site, with 23,000 students

Locally elected trustees:
William P. Moses, President
Eugene H. Ross, Vice President
Lloyd Farr, Secretary
William M. Corey
Lee R. Winters

President: Dr. Phyllis L. Peterson

NETC Liaison: Mr. Les Birdsall, Director of Research

Other administrators and faculty with important transfer responsibilities:
Dr. Charles K. Sapper, Dean of Instruction
Ms. Diane Scott-Summers, Dean of Student Services
Dr. Robert Wynne, Division Chairperson for Counseling
Ms. Marilyn Christenson, Counselor and Articulation Coordinator
Dr. James Stubblefield, Counselor and Developer of DVC's Computerized Articulation System

Mission: Diablo Valley provides students with an opportunity for a general or liberal arts education and/or training for employment in paraprofessional, vocational and technical fields. The college accepts the responsibility to be an instrument of lifelong learning, and offers a curriculum appropriate to that goal. To enhance the effectiveness of its academic opportunities, Diablo Valley provides a wide range of support services for students and resources for the community.

Key facets of the transfer program: Diablo Valley's transfer program offers students prudent counseling; monitors the requirements of four-year institutions; and makes approved courses available to transfer students. Partnership agreements with some colleges guarantee admission upon satisfactory completion of required courses, and a computerized articulation system supplies printouts of courses necessary for admission to any major at any California four-year institution. Advisors visit from area colleges and universities on a regular basis.

College of DuPage

22nd Street and Lambert Road
Glen Ellyn, IL 60137

Founded: 1965
Serving: DuPage County and parts of Cook and Will Counties at two campuses and eighty off-campus sites, with 28,000 students

Locally elected trustees:
Robert D. Kelly, Chairman
Marjorie G. Bardeen, Vice Chair
William R. Bunge
Peggy Connolly
Ronald E. Keener
Diane K. Landry
M. Faiyaz Hussain, Student Trustee

President: Dr. Harold D. McAninch

NETC Liaison: Mr. Theodore Tilton, Provost, Central Campus

Other administrators and faculty with important transfer responsibilities:
Ms. Kay Nielsen, Dean, Student Affairs
Ms. Carole Dobbie, Director, Counseling
Mr. Donald Dame, Coordinator, College and University Articulation

Mission: The College of DuPage seeks to provide educational opportunities of the highest quality for people of any race, creed, gender, or national origin who want to improve their vocational and avocational skills, or enjoy cultural or recreational activities. This is accomplished through the following six programs or services:
1. The first two years of baccalaureate education
2. Career education
3. General studies
4. Community education
5. Public service activities
6. Student support services

Key facets of the transfer program: At DuPage, a full time person is employed to articulate programs and services with all four-year institutions in the state. Compacts between all state universities exist whereby graduates of DuPage may enroll with full junior standing. A full time person is also employed to articulate College of DuPage programs and services with high schools in the college's district to develop course articulation agreements with them. The college will open a transfer center in the Fall of 1990.

El Centro College

701 Elm Street, Suite 400
Dallas, TX 75202

Founded: May, 1965
District: Dallas County Community College District, Dr. J. William Wenrich, Chancellor
Serving: Dallas County at one campus, with 5,200 students

Locally elected trustees:
Mr. Don Buchholz, Chairman
Dr. Robert A. Bettis
Mr. Kenneth M. Pace
Mr. James W. Smith
Mr. J.D. Hall, Vice Chairman
Mr. Jerry Gilmore
Mrs. Pattie Powell

President: Dr. Wright L. Lassiter, Jr.

NETC Liaison: Dr. Richard D. McCrary, District Director, Student and International Programs

Other administrators and faculty with important transfer responsibilities:
Mr. Ernest Thomas, V.P., Student Development, Brookhaven College
Dr. James Harlow, V.P., Student Development, Cedar Valley College
Mr. Felix Zamora, V.P., Student Development, Eastfield College
Dr. Joe Sullivan, V.P., Student Development, El Centro College
Dr. Corina Gardea, V.P., Student Development, Mountain View College
Dr. Margaret Lewis, V.P., Student Development, North Lake College
Dr. Deana Graham, V.P., Student Development, Richland College

Mission: El Centro offers a wide range of first and second-year transfer courses, as well as one and two-year programs in technical and occupational fields. The college also offers credit and non-credit adult educational courses, and community service programs on cultural, civic, and other topics.

Key facets of the transfer program: El Centro provides course-by-course equivalency guides for approximately twenty-five schools to which its students transfer. It also provides Course Selection Guides (which indicate a specific major and courses needed in the first two years at a number of colleges/universities) to counselors/advisors. All of this information is updated annually. Finally, El Centro participates in a regional computer network which permits the sending and receiving of electronically produced transcripts.

Foothill College

12345 El Monte Road
Los Altos Hills, CA 94022

Founded: 1958
District: Foothill-De Anza Community College District, Thomas W. Fryer, Chancellor
Serving: Los Altos, Mountain View, Cupertino and a portion of Palo Alto at two campuses and two off-campus sites, with 19,000 students

Locally elected trustees:
Dr. Robert C. Smithwick
Mary Wallace Wheat
Alfred P. Chasuk
Gene Murden, Student Trustee
Dr. Gerald Besson
Raymond F. Bacchetti
Nathan Hill

President: Dr. Thomas H. Clements

NETC Liaison: Mrs. Mary Lou Heslett, Transfer Center Director

Other administrators and faculty with important transfer responsibilities:
Dr. Harry Saterfield, Dean of Counseling and Matriculation
Dr. Dick Charles, Dean of Student Services
Dr. Murray Shipnuck, Articulation Officer
Mr. Larry Miller, Assistant Dean of Matriculation and Transfer

Mission: Foothill's mission is to provide two years of college which parallel the requirements of the University of California, the state colleges, and private colleges and universities; vocational courses for those who intend to seek employment; general courses for those who desire to broaden their cultural knowledge and to study the arts; and cultural courses, forums, and vocational classes for all members of the community who wish to continue life-long learning.

Key facets of the transfer program: The Transfer Center answers students' questions concerning transfer to four-year schools, and assists those students in their transfer goals. Two innovative approaches used are early identification of students who intend to transfer and comprehensive workshops for faculty/staff to define the goals, objectives and criteria of the transfer program.

HARTNELL COLLEGE

156 Homestead Avenue
Salinas, CA 93901

Founded: 1920
Serving: Salinas Valley at one campus and two off-campus sites, with 7,000 students

Locally elected trustees:
Mr. Lloyd W. Lowrey, President
Mr. York F. Gin
Mr. Ray Diaz
Ms. Connie M. Sonico
Mr. John E. Metzer, Vice President
Mr. John W. Inman
Ms. Joanne B. Lasnik

President: Dr. James R. Hardt

NETC Liaison: Mr. Ignacio Pando, Vice President for Student Services

Mission: Hartnell promotes creative approaches to teaching and challenges each student to attain high levels of achievement and success. Furthermore, it recognizes the value of education and supports the concept of a diverse approach to education to meet the needs of students. The college believes in the dignity and worth of the individual as expressed through general education and transfer courses, occupational education, developmental education, community education and services, and student services and career development.

Key facets of the transfer program: Innovative aspects of the transfer program at Hartnell include the Guaranteed Admissions Program, which insures Hartnell students admission to the California University System, and the Transfer Center, which assists students with the application process, coordinates visits by university representatives, and sponsors transfer day/college night for local high schools.

Honolulu Community College

874 Dillingham Blvd.
Honolulu, HI 96817

Founded: 1965
District: University of Hawaii Community College District, Dr. Joyce S. Tsunoda, Chancellor
Serving: Greater Honolulu area at one campus and three off-campus sites, with 4,000 students

Board of Regents:
Mr. Robin K. Campaniano
Dr. Kenneth N. Kato
Mrs. Ruth M. Ono
Mr. Herbert M. Richards, Jr.
Mr. Roy Y. Takeyama
Mr. Dennis R. Yamada
Ms. Momi W. Cazimero
Mr. Edward M. Kuba
Ms. Diane J. Plotts
Mr. H. Howard Stephenson
Mr. John T. Ushijima

Provost: Dr. Peter R. Kessinger

NETC Liaison: Mr. Ramsey R. Pedersen, Acting Dean of Instruction

Other administrators and faculty with important transfer responsibilities:
Mr. Donald J. Bourassa, Acting Assistant Dean of Instruction
Mr. Harry Kawamura, Assistant Dean of Instruction
Dr. Margaret Haig, Assistant Dean of Instruction
Mrs. Karen Kelly, Assistant Dean of Instruction

Mission: Honolulu Community College provides two-year college transfer and general education programs, semi-professional, technical, vocational, and continuing education programs, and other educational programs and services to a wide range of students.

Key facets of the transfer program: HCC has adopted a philosophy which links technological and pre-professional training into a continuum from non-credit workshops and seminars through articulation toward baccalaureate training. This three-tiered (non-credit, first two years of baccalaureate, transfer to BA institution) approach is being developed in the areas of Human Services (Developmental Disabilities, Child Care), Business (Retail Merchandising, Entrepreneurship), and Fashion Technology.

KAPIOLANI COMMUNITY COLLEGE

4303 Diamond Head Road
Honolulu, HI 96816

Founded: 1965
District: University of Hawaii Community College District, Dr. Joyce S. Tsunoda, Chancellor
Serving: East Honolulu at one campus, with 5,700 students

Board of Regents:

Kenneth Kato, Chair	Tatsuki Shiramizu, Secretary
Robin Campaniano	Dennis Yamada
Momi Cazimero	Edward Kuba
Ruth Ono	Diane Plotts
Herbert Richards	H. Howard Stephenson
Roy Takeyama	John Ushijima

Provost: Dr. John Morton

NETC Liaison: Ms. Lydia Leong, Admissions and Records Coordinator

Other administrators and faculty with important transfer responsibilities:
Dr. Leon Richards, Dean of Instruction
Mr. Ralph Ohara, Dean of Student Services
Dr. Angela Meixell, Assistant Dean of Instruction
Mr. James Jeffryes, Assistant Dean of Instruction

Mission: Kapiolani provides a comprehensive liberal arts program with special emphases on pre-baccalaureate programs in business, health sciences, education, fine arts and psychology. Two-year occupational programs are offered in business, legal assisting, nursing and allied health sciences, and food service and hospitality education. A large non-credit program provides short-term training to businesses and industry and residents of the East Honolulu area.

Key facets of the transfer program: Operating as part of the University of Hawaii system provides a close relationship between Kapiolani and the baccalaureate granting colleges of the University. Within the college, emphasis is placed on pre-baccalaureate programs that complement the occupational programs offered by the college. This provides students with a full range of educational options within a field while taking advantage of the expertise of the faculty and the facilities available to support both the pre-baccalaureate and vocational options within a program.

Lorain County Community College

1005 North Abbe Road
Elyria, OH 44035

Founded: July 15, 1963
Serving: Lorain County and surrounding counties at one campus, with 6,600 students

Appointed trustees:
Robert A. Wharton, Chairman
Roy A. Church, Secretary
Dr. Marvin Anderson
Mabel L. Ewing
John E. Renner
Madeline Torres-Hutlock
Richard T. Laux, Vice Chairman
Donald R. Arnold, Treasurer
Richard Desich
Kel Fligner
Victor F. Stewart, Jr.

President: Dr. Roy A. Church

NETC Liaison: Mr. Jerry N. Kuba, Coordinator, Grants and Special Programs

Other administrators and faculty with important transfer responsibilities:
Dr. Robert A. Beckstrom, Director, Division of Language and Humanities
Mr. James H. Carney, Director, Division of Science and Mathematics
Dr. Mary Ann Stevenson, Director, Division of Business
Dr. Claudia Chiesi, Vice President, Academic Affairs and Student Services
Mr. Charles E. Fye, Director, Social Sciences Division

Mission: Lorain County Community College seeks to provide access to a broad spectrum of learning experiences, tailored to the needs of the college's constituency at the lowest possible cost consistent with high quality results.

Key facets of the transfer program: Lorain County Community College has developed the University Parallel-College Transfer Education program, which provides the first two years of transfer and preprofessional education of the highest quality to each student eligible for the pursuit of such education, and prepares the student with a proficient background in his or her chosen field of study which will be commensurate with the first two years of education at a four-year college or university.

MASSAACHUSETTS BAY COMMUNITY COLLEGE

50 Oakland Street
Wellesley Hills, MA 02181

Founded: 1961
Serving: Greater Boston/Metro West at two campuses and three off-campus sites, with 4,000 students

Board of Regents:

Norman F. Grossman, Chairman	Dr. Toye Lee Brown
George E. Christodoulo	L. James DeWolfe, Jr.
Felix Juliani	Ramesh K. Motwane
Laura B. Morris	Verne W. Vance
Susan Wolfe	Mark Comeau, Student Trustee

President: Mr. Roger A. Van Winkle

NETC Liaison: Ms. Marjory A. Stewart, Dean, Experimental College

Other administrators and faculty with important transfer responsibilities:
Mr. John Meade, Coordinator for Counseling
Mr. Glenn Gabbard, Associate Dean for Alternative Instruction and Basic Disciplines
Ms. Donna Green, Associate Dean for Research and Assessment
Ms. Carol Scott, Dean for Marketing and Student Services

Mission: Massachusetts Bay serves as an open-access, comprehensive, student-centered, degree and certificate-granting institution. It seeks to provide specialized educational programs, training, and services. In support of academic excellence, MBCC requires all graduates to demonstrate competency in reading, writing/communications, mathematical computation, critical thinking techniques and applications, technological literacy, and racial and cross-cultural understanding. While encouraging computer literacy of all students, the College requires graduates to be familiar with computer applications, and to understand the impact of technology on their lives and on society.

Key facets of the transfer program: A Transfer Articulation Committee, comprised of representatives from the college's administration, faculty, and counseling staff, participates in the development and implementation of articulation and transfer agreements. Over thirty-five public and private institutions are included.

Mesa Community College

1833 West Southern Avenue
Mesa, AZ 85202

Founded: July 1, 1965
District: Maricopa County Community College District, Paul A. Elsner, Chancellor
Serving: Mesa, Arizona at one campus and one off-campus site, with 20,000 students

Locally elected trustees:
Dr. Roy C. Amrein, President
Dr. Donald R. Campbell, Secretary
Mrs. Linda B. Rosenthal
Dr. M. Grant Christensen
Ms. Barbara Hitchcock

President: Dr. Larry Christiansen

NETC Liaison: Dr. Kaye McDonald, Dean of Student Services

Other administrators and faculty with important transfer responsibilities:
Dr. Richard Malcolm, Dean of Instruction: Arts and Sciences
Mr. Bill Holt, Acting Dean of Instruction: Business and Industry

Mission: Mesa is a full-service college providing experience in academic (transfer), technical, occupational, special interest, and continuing education courses.

Key facets of the transfer program: Mesa has established a cooperative program with Arizona State University to better serve transfer students. This program now includes an ASU Transfer Office on the Mesa campus and a Community College Hotline which provides phones at ASU registration sites so that students can call and be admitted and enrolled in the Maricopa college which best suits their needs.

MODESTO JUNIOR COLLEGE

435 College Avenue
Modesto, CA 95350

Founded: 1921
District: Yosemite Community College District, Tom Van Groningen, Chancellor
Serving: Stanislaus and Tuolumne Counties, and selected high school districts in San Joaquin, Merced, Santa Clara Counties, at one campus, with 16,000 students

Locally elected trustees:
Dr. Grant E. Bare, President
Robert J. Cardoza
Brice Draper
Delsie Schrimp
Allister A. Allen, Vice President
Joanna Doerksen
Nancy R. Rosasco

President: Dr. Stanley Hodges

NETC Liaison: Dr. Wilma McLeod, Dean of Student Services

Other administrators and faculty with important transfer responsibilities:
Mr. Juan Alvarez, Assistant Dean of Student Services
Mr. Ron Manzoni, Dean of Instruction
Mr. Dudley Roach, Assistant Dean of College Services
Mrs. Shirlee Adams, Articulation Officer
Mr. Steve Collins, Assistant Dean of Instruction
Ms. Therese "Susie" Hegoas, Director of Student Information Center

Mission: Modesto emphasizes development of knowledge, values, skills and attitudes for improvement, and is devoted to excellence in its instructional and service programs. The college recognizes the need for an atmosphere of intellectual stimulation for students, staff and community, and the importance of life-long learning.

Key facets of the transfer program: Modesto has guaranteed transfer agreements with several CSUand UC campuses, and schedules student appointments with four year representatives. An Advising Transfer Document shows four-year college requirements by major. High school counselors teach Modesto guidance classes and advise during new student registration, allowing new students to learn about the transfer program prior to entry.

Mt. San Antonio Community College

1100 North Grand Avenue
Walnut, CA 91789

Founded: 1946
Serving: Eastern Los Angeles County, San Gabriel, La Puente, Pomona and Walnut Valleys at one campus and two off-campus sites, with 21,700 students

Locally elected trustees:
Gary V. Miller, President
Barbara Booth, Vice President
Howard Hawkins, Secretary
Kenneth Hunt
Dr. Gerald Zunino

President: Dr. John D. Randall

NETC Liaison: Dr. Barbara Ann Hall, Director of Institutional Research

Other administrators and faculty with important transfer responsibilities:
Mr. Joseph M. Zagorski
Dr. Bruce Paulson
Ms. Elizabeth Cipres
Mr. Bob Stuard, President of Faculty Senate
Dr. Kay Ragan
Dr. Ernie Gregiore
Ms. Ana Tafoya-Diaz
Ms. Marilyn Kaecke

Mission: Teaching excellence and faculty-student interaction make Mt. San Antonio the ideal beginning for a Bachelor's degree or entrance into an occupational program. Small classes, faculty commitment to student success and comprehensive student services assist thousands of students each year to transfer, enter occupations and upgrade job skills.

Key facets of the transfer program: Through the Guaranteed Student Transfer Program, Mt. San Antonio guarantees admission to the California State University. The College Transfer Center provides a full range of transfer services including admissions, housing, financial aid, scholarship information, a complete library of college and university catalogs, video library, student access to computerized articulation, free student transcripts, free transfer referrals, educational advisement and university tours.

PORTLAND COMMUNITY COLLEGE

P.O. Box 19000
Portland, OR 97219

Founded: 1961
Serving: Greater Portland area at three campuses and two off-campus sites, with 48,000 students

Locally elected trustees:
Karen McKinney, Chair
Dana Anderson
Monica Little
Dan Saltzman, Vice Chair
Norma Jean Germond
Keith Skelton

President: Dr. Daniel F. Moriarty

NETC Liaison: Alice Jacobson, Vice President, Planning and Development

Other administrators and faculty with important transfer responsibilities:
Barbara Murphy, Associate Dean, General Education and Transfer Programs
Robert Palmer, Dean, Student Development
Peter Hirsch, Associate Dean, Liberal Arts and Sciences/Sylvania
Craig Bell, Associate Dean, Student Development/Sylvania
Gary Storey, Associate Dean, Liberal Arts and Sciences/Sylvania
Penny Wills, Associate Dean, Student Services and Education/Cascade
Steve Rathman, Associate Dean, Arts and Sciences/Rock Creek
Sherry Robinson, Associate Dean, Student Development/Rock Creek
Bob Archibald, Director, Admissions/Orientation/Advising

Mission: Portland provides quality education in an atmosphere that encourages the full realization of each individual's potential. As a public comprehensive, post-secondary institution, the college offers accessible and affordable education to district residents, focusing on lower division college transfer programs, occupational and technical programs, basic skills education and community education programs.

Key facets of the transfer program: College transfer fairs bring college and university admissions officers to PCC campuses to talk directly with students about admissions requirements, financial aid applications, etc. Small group advising sessions are offered specifically for transfer students throughout the year. Faculty awareness of transfer requirements ensure that lower division courses are readily accepted by Oregon's four-year institutions and that students are well-prepared for upper division work.

Community College of Rhode Island

400 East Avenue
Warwick, RI 02886

Founded: 1964
Serving: Rhode Island at three campuses and five off-campus sites, with 15,500 students

Locally elected trustees:

J. William Corr, Jr., Chairman
Stephen M. Burns, Secretary
Charles H. Berchtold
Miriam Curtis Coleman
George Graboys
Anne M. Hartmann
Paul A. MacDonald
Henry J. Nardone, Vice Chairman
Robert V. Bianchini, Treasurer
Marilyn H. Winoker
Richard R. Patterson
Americo W. Petrocelli
Frederick Lippitt
Mark Weiner, Sr.

President: Mr. Edward J. Liston

NETC Liaison: Ms. Nancy Abood, Assistant to the President

Other administrators and faculty with important transfer responsibilities:
Dr. Raymond Ferland, Vice President/Student Affairs
Dr. Robert Silvestre, Vice President/Academic Affairs
Dr. Judeth Crowley, Dean/Instruction
Dr. William LeBlanc, Director/Institutional Research and Planning

Mission: The college provides open access to higher education for the people of the state. It offers an ambitious array of post-secondary programs in academic transfer and vocational-technical areas. In addition, CCRI provides support services necessary to student success and a wide variety of non-credit community service programming.

Key facets of the transfer program: Last year, over nine hundred students transferred to four-year colleges and universities from CCRI. The college has articulation agreements with the University of Rhode Island and Rhode Island College as well as with other institutions of higher education in the state which provide for the transfer of credits from one institution to another.

RIVERSIDE COMMUNITY COLLEGE

4800 Magnolia Avenue
Riverside, CA 92506

Founded: 1916
Serving: Northwestern corner of Riverside County at one campus and four off-campus sites, with 18,000 students

Locally elected trustees:
Dr. Dorothy Gates, President
Mrs. Patsy Martin McCoy, Secretary
Dr. Wilfred Airey
Dr. Alan Pauw, Vice President
Mrs. Francis Nelson

President: Dr. Charles A. Kane

NETC Liaison: Mr. Evan Vail, Dean, Research and Planning

Other administrators and faculty with important transfer responsibilities:
Dr. Frank Budd, Vice President/Assistant, Superintendent, Academic Services
Ms. Joyce Black, Vice President/Assistant, Superintendent, Student Services
Mr. Richard Stover, Provost, Riverside City Campus
Dr. David Richardson, Provost, Moreno Valley Center
Dr. Marie Pepicello, Provost, Norco Center
Ms. Allene Timar, Coordinator, Matriculation
Ms. Judy Haugh, Coordinator, Counseling

Mission: Riverside promotes the values of student centeredness, teaching excellence, learning environment, and tradition. Its goals are general education, transfer or lower division education, occupational-technical education, continuing education, and student services.

Key facets of the transfer program: Besides having guaranteed admissions agreements with the closest public universities and solid articulation agreements with other transfer institutions, Riverside works hard at preparing transfer students for work at four-year institutions. Consequently, there are only slight differences in the grade point averages earned by students at Riverside and the grade point averages they earn at institutions to which they transfer.

Rochester Community College

851 30th Avenue, S.E.
Rochester, MN 55904

Founded: 1915
Serving: Southeastern Minnesota at one campus and five off-campus sites, with 3,600 students

Appointed trustees:
Clarence Harris, President
James B. Collier, Secretary
Elaine Markey
John Borchert
Cindy Hanson, Student Trustee
Ruth Herring, Vice President
Patricia Goldman
Richard Niemiec
Pierre Mattei

President: Dr. Geraldine A. Evans

NETC Liaison: Dr. Verlyn W. Heldt, Dean of Instruction

Other administrators and faculty with important transfer responsibilities:
Dr. Ronald E. Thomas, Dean of Student and Community Services
Mr. Gary A. Swenson, Director of Business Services
Dr. Donald C. Olsen, Associate Dean of Instruction
Dr. Fred J. Allen, Director of Humanities
Dr. Julie A. Goodman, Director of Nursing and Health Related Sciences
Dr. Gloria J. Vogt, Director of Business Programs and Business Outreach
Ms. Arlouene L. Olson, Director of Community Services

Mission: Rochester exists to aid individuals, especially the people of southeastern Minnesota, to further their ambitions, to develop to the full extent of their potential, and to improve their lives and their earning potential, as well as to further the economic development and potential of the region. To meet this goal, Rochester provides transfer programs, occupational programs, liberal arts education, continuing education, community services, support services and activities.

Key facets of the transfer program: The key features of Rochester's program include academic advising, special joint admission and articulation between Rochester and the most popular transfer institutions, and sixteen bachelor's degree programs and three master's degree programs available on the campus, offered by the neighboring state university.

SACRAMENTO CITY COLLEGE

3835 Freeport Blvd
Sacramento, CA 95822

Founded: 1916
District: Los Rios Community College District, Dr. Marjorie K. Blaha, Chancellor
Serving: Greater Sacramento area and Davis at one campus and four off-campus sites, with 18,000 students

Locally elected trustees:

Mr. David K. Marty, President
Mr. David E. Brown
Mr. Claude J. Farinha
Dr. Lawrence C. Wanlass
Mrs. Penny Kastanis, Vice President
Mr. Fred A. Dawkins
Dr. Albert S. Rodda
Mr. Donald Trujillo, Student Trustee

President: Dr. Robert Harris

NETC Liaison: Dr. Carol R. McKenzie, Director of Research, Planning, and Development

Other administrators and faculty with important transfer responsibilities:
Mr. Barry Tucker, Vice President, Student Services
Mr. Al Ghoston, Dean, Counseling
Dr. Donald D. Johnson, Counselor, Transfer Center Director
Dr. John H. Suter, Counselor, Articulation Officer

Mission: Sacramento City College is guided by the three organizing principles of access, excellence, and values. Its purpose is to provide opportunities for critical thinking, general, transfer and vocational education, personal and social development, and aesthetic experiences. The College reflects and is responsive to the needs of its culturally diverse community.

Key facets of the transfer program: Los Rios Community College District and Sacramento City College have pioneered a Transfer Admission Agreement with UC Davis, CSU Sacramento, and the University of the Pacific, at which students who successfully complete required courses are guaranteed admission into specific programs. The Transfer Center provides comprehensive services including a computerized transfer information system — ASSIST — no-fee Crossover Enrollment, and university representatives.

College of San Mateo

1700 West Hillsdale Blvd.
San Mateo, CA 94402

Founded: 1922
District: San Mateo County Community College District, Glenn P. Smith, Chancellor
Serving: San Mateo County at one campus and ten off-campus sites, with 14,400 students

Locally elected trustees:

James R. Tormey, Jr., President	William E. Jordan, Clerk
Tullio Bertini	Thomas L. Constantino
Helen Hausman	David E. Hunt, Student Trustee

President: Dr. Lois A. Callahan

NETC Liaison: Dr. Patricia L. Griffin, Vice President, Student Services

Other administrators and faculty with important transfer responsibilities:
Mr. John F. Mullen, Dean of Admissions and Records
Mr. Steven Morehouse, Dean of Counseling/Advising and Matriculation
Ms. Marcia Mahood, Coordinator of Counseling (Acting)

Mission: San Mateo is committed to identifying and responding to the educational needs of the community; providing an environment which enables students to understand their individual potential; encouraging the pursuit of life-long learning in a changing world; and maintaining a climate of academic freedom in which a variety of viewpoints may be shared.

Key facets of the transfer program: San Mateo has an innovative faculty advising program which assists students in establishing realistic goals and developing a sound educational plan to achieve those goals. Each day-student enrolled in more than six day-units is assigned to a counselor or faculty advisor who is knowledgable about the student's field of interest or major.

SANTA BARBARA CITY COLLEGE

721 Cliff Drive
Santa Barbara, CA 93109

Founded: 1909
Serving: South Coast, Santa Barbara County at one campus and two off-campus sites, with 11,000 students

Locally elected trustees:

Mrs. Joyce H. Powell, President	Mr. Eli Luria, Vice President
Dr. Kathryn O. Alexander	Dr. Joe W. Dobbs
Mr. Sidney R. Franil	Mr. Leonard S. Jarrott
Mr. Ed S. Santodomingo	Mr. John Brunello, Student Trustee

President: Dr. Peter R. MacDougall

NETC Liaison: Mr. William B. Hamre, Assistant to the President

Other administrators and faculty with important transfer responsibilities:
Mr. John Romo, Vice President, Academic Affairs
Ms. Lynda Fairly, Vice President, Student Affairs
Dr. Jack Friedlander, Dean, Academic Affairs
Mr. Keith McLellan, Dean, Student Development
Mr. Armando Segura, Transfer Center Director
Ms. Lana Rose, SBCC/UCSB Transition Program
Ms. Victoria Rosario, Transfer Achievement Program

Mission: Santa Barbara seeks to provide uncompromisingly excellent quality of instruction throughout a comprehensive curriculum which supports a strong transfer program, a diverse occupational program, and general credit and non-credit community education opportunities; and to create and maintain an environment which emphasizes teaching and learning and promotes equal educational opportunity to postsecondary education.

Key facets of the transfer program: The Transfer Center serves as a "one-stop" transfer information, advocacy, and program provider to students, faculty, and counselors. A Transfer Achievement Program (TAP) provides special services to underrepresented minority students who are guided by an innovative "Student Transfer Task Inventory." These efforts build on excellent articulation with high schools and four-year institutions.

Santa Rosa Junior College

1501 Mendocino Avenue
Santa Rosa, CA 95401

Founded: 1918
Serving: Sonoma County and a portion of Mendocino County at one campus and four off-campus sites, with 25,000 students

Locally elected trustees:
B. Robert Burdo, President
L.A. Bertolini, Vice President
Thomas A. Taylor, Clerk
Robert Call
Linda Keill
Al Maggini
William B. Race

President: Dr. Robert F. Agrella

NETC Liaison: Dr. David B. Wolf, Vice President, Academic Affairs

Other administrators and faculty with important transfer responsibilities:
Dr. Edmund Buckley, Dean of Instruction, Liberal Arts & Academic Standards
Dr. Robert Blanchard, Dean of Instruction, Occupational Education
Mr. Ken D. Holback, Dean of Student Services
Ms. Evelyn Pollard, Assistant Dean, Counseling
Mr. Richard Rose, Department Chair, Guidance
Mr. Everett J. Traverso, President, Academic Senate
Mr. David Reagan, Matriculation Administrator

Mission: Santa Rosa Junior College is committed to meeting the special education needs of the community and eliminating economic, psychological, and physical barriers to college attendance. The college offers comprehensive programs organized around general education, transfer education, occupational education, developmental education, continuing education, student services and community services.

Key facets of the transfer program: A team of administrators and faculty members visit universities and query students who have transferred from Santa Rosa Junior College regarding what college programs had been useful and what could have been improved. This forms the basis for program modification. Furthermore, a Transfer Experience course encourages students to investigate options. Articulation information, transfer tips, computerized counseling screens and transfer major sheets are available for counselors and students.

SINCLAIR COMMUNITY COLLEGE

444 West Third Street
Dayton, OH 45402

Founded: 1887
Serving: Montgomery County at one campus and 39 off-campus sites, with 17,500 students

Governor appointed trustees:

Frederick C. Smith, Chairman	Charity Edna Earley, Vice Chairman
Robert T. Hill	Ponnie Kendell
Virginia McNeal	John E. Moore
Robert S. Neff	Burnell R. Roberts
Carol M. Shaw	David H. Ponitz, President of College

President: Dr. David H. Ponitz

NETC Liaison: Dr. Clifford V. Barr, Dean, Liberal Arts and Sciences Div.

Other administrators and faculty with important transfer responsibilities:
Dr. Ned J. Sifferlen, Vice President for Instruction
Dr. Edna D. Neal, Vice President for Student Services
Dr. Eva F. Abdullahi, Academic Advisor, Liberal Arts and Sciences
Dr. Fanny B. Kisling, Professor, Counselor, Liberal Arts and Sciences
Ms. Joyce Haywood, Academic Advisor, Liberal Arts and Sciences

Mission: Sinclair offers associate degrees and continuing education and is committed to serving the educational needs of the citizens of Montgomery County. The main purpose of the college is to provide career-oriented credit courses leading to certificate and/or associate degrees that prepare students for employment, or to transfer to four-year colleges and universities to pursue higher degrees.

Key facets of the transfer program: Sinclair maintains close cooperation with the two four-year universities in the city of Dayton — Wright State University (public) and the University of Dayton (private). Due to carefully prepared articulation agreements, students who plan to transfer, and who follow the recommended curricula, do so with little or no loss of credit. Counselors from those universities, and others, maintain office hours on the Sinclair campus to assist students in planning for transfer. Sinclair also provides counseling services for transfer students.

Southwestern College

900 Otay Lakes Road
Chula Vista, CA 92010

Founded: 1961
Serving: Southern San Diego County at one campus and two off-campus sites, with 16,000 students

Locally elected trustees:
Maria Neves-Perman, President
Augie Bareno
Jerry Griffith
Bill Blank, Vice President
G. Gordon Browning

President: Mr. Joseph M. Conte

NETC Liaison: Ms. Norma Hernandez, Vice President, Student Services

Other administrators and faculty with important transfer responsibilities:
Dr. Tom Hahn, Vice President, Academic Affairs
Mr. Jaime Salazar, Director, Transfer Center and Student Affairs
Dr. Barry Horlor, Articulation Officer
Mr. Douglas Garrison, Associate Dean for Student Services
Ms. Cristina Chiriboga, Dean, Language Arts
Ms. Patricia Caldwell, Dean, Fine Arts and Humanities
Dr. Roy Olson, Dean, Math/Sciences
Dr. Tony Thele, Dean, Business

Mission: Southwestern is committed to serving its diverse and multicultural community by providing dynamic, quality education which promotes the personal, career, and educational goals of its members. To this end, the College encourages participation by all to improve the quality of life for individuals and to promote the social, economic and cultural development of their communities.

Key facets of the transfer program: SWC has a transfer center that provides all interested students with college-specific information related to admission requirements, assessment of transcripts, campus tours and mentors. Counseling services from selected local universities conduct scheduled office hours and assistance during fall and spring semesters. Assistance in completing application forms and/or qualifying for financial aid is provided, as needed, by center staff.

ST. LOUIS COMMUNITY COLLEGE AT MERAMAC

300 South Broadway
St. Louis, MO 63102

Founded: 1962
District: St. Louis Community College District, Michael Crawford, Chancellor
Serving: St. Louis City and County at one campus and eighteen off-campus sites, with 14,800 students

Locally elected trustees:

Ms. Lois Bliss, President	Mr. Claude Brown, Treasurer
Mr. John Clark, Vice-President	Mr. John McClaughin, Secretary
Ms. Julia Muller	Ms. Glenda Mitchell-Myles

President: Dr. Gwendolyn Stephenson

NETC Liaison: Mr. John Cosgrove

Other administrator with important transfer responsibilities:
Dr. Richard Black

Mission: St. Louis is a comprehensive community college designed to meet the multiple education and training needs of its community. The college recognizes a broad definition of "student" and is committed to providing programs and services that are academically, geographically, and financially accessible to the diverse community served by the college. The college assumes responsibility for the delivery of high quality instruction and support programs to the broad range of students who enroll.

Key facets of the transfer program: The most effective feature of the transfer program is the commitment to early and successful student advising, which is based on constant communication between the college's transfer center and potential transfer students. The college employs a cadre of academic advisors who work a flexible schedule enabling the college to meet both regular and peak load student demands. Counselors are freer to provide counseling services and students have access to drop-in academic advising at any time during the year.

Washtenaw Community College

4800 East Huron River Drive
Ann Arbor, MI 48106

Founded: 1965
Serving: Washtenaw County at one campus and 14 off-campus sites, with 10,000 students

Locally elected trustees:
Richard W. Bailey, Chair
James W. Anderson, Jr., Secretary
Nancy N. Margolis
Anthony J. Procassini
Vanzetti M. Hamilton, Vice Chair
Marcia D. Harrison
R. Griffith McDonald

President: Dr. Gunder A. Myran

NETC Liaison: Dr. Guy Altieri, Vice President, Instruction and Student Services

Other administrators and faculty with important transfer responsibilities:
Dr. Richard L. Galant, Dean, Humanities and Social Sciences
Mr. George H. Griswold, Dean, Mathematics and Natural Sciences
Dr. Bella G. Parker, Dean, Business Administration

Mission: Washtenaw strives to make a positive difference in people's lives through accessible and excellent educational programs and services. The college provides a caring, open-door teaching and learning environment; excellent teaching, counseling, and support services; help to those with a limited income or other barriers to success; a chance for people to progress in their academic and career pursuits; and the strength of a partnership with the communities that it serves.

Key facets of the transfer program: Students who earn associate degrees at Washtenaw and complete certain basic requirements in the liberal arts and natural sciences are guaranteed to have met the first two years of requirements of most Michigan four-year institutions. In addition, Washtenaw has special transfer agreements with Cleary College, Eastern Michigan University, and the University of Michigan School of Natural Resources. A Minority Alliance Program facilitates the transfer of qualified and well-prepared minority students from Washtenaw Community College to the University of Michigan under a mentoring system designed to insure the completion of the bachelors degree.

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